

In This Issue—*Let the Salesman Guard His Words*

# MOTOR AGE

Vol. LI  
Number 16

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CHICAGO, APRIL 21, 1927

Thirty-five Cents a Copy  
Three Dollars a Year

## Playing safe on the future

by

F. E. Moskovics, President

STUTZ MOTOR CAR COMPANY OF AMERICA, Inc., Indianapolis

AT times it is necessary for some manufacturers to reduce prices on certain of their passenger car models. Why? Because, those models are out-dated and those manufacturers hear the voice of the motoring public. It is important for you to watch any investment that you may have in merchandise of the obsolete type. It is important to preserve the trust your customers repose in you.

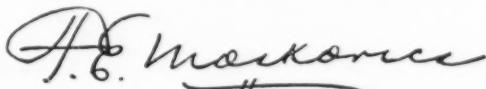
You can hold their confidence only by selling them, a few months hence, motor cars that are up-to-date, proven, and safe in the modern sense.

High cars will soon be as dead as the dodo bird, and as little in demand. The leader in this movement to advanced engineering has been, and is, the New Safety Stutz. That is one reason why Stutz dealers made money last year. Today the car stands proven by thousands of owners, over millions of road-miles. The doubting-Thomases have vanished into the dimness of the past.

If every prospect who last year said he would buy the New Safety Stutz after it had been out a year should carry out that "threat," the factory will be swamped.

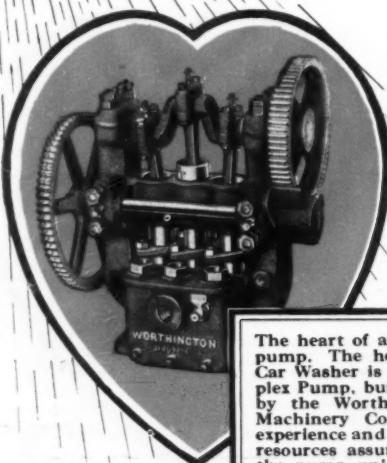
Write me today and I'll show you how to cash in on this tremendous public appeal.

(Signed)



# MANLEY ONE GUN AUTO WASHER

At last an efficient Auto Washer for the average garage at a popular price.



The heart of any car washer is its pump. The heart of the Manley Car Washer is a Worthington Triplex Pump, built exclusively for us by the Worthington Pump and Machinery Co., whose years of experience and whose facilities and resources assure dependability in the pump unit not obtainable in machines hastily designed by concerns smaller and less experienced in pump manufacture.

There is no need for a Two-Gun Auto Washer on a One-Man wash rack. For this reason the Manley One-Gun Auto Washer is the proper machine for 70% of all the shops operating wash racks.

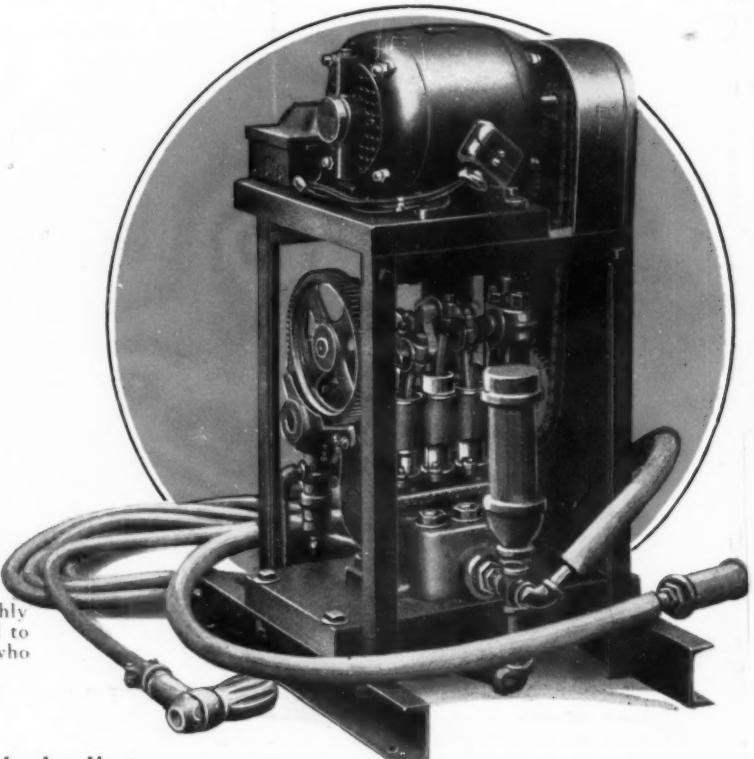
Even if you operate two men on your wash stand the Manley One-Gun Auto Washer is ample. One man can do the spraying and the second man follows up with the sponge. Both men do chamoising after the spraying and sponging are completed.

The Manley One-Gun Auto Washer is recommended where wash stands are operated on several floors, as this enables you to have an individual washer for each wash stand, which is the most economical arrangement.

## SPECIAL FEATURES

- Vertical Construction
- Unusually compact
- Perfected control valve and safety valve
- Worthington pump
- No leather washers
- Packing glands easily accessible
- Guides absorb side thrust
- Pump valves easily accessible
- Drop forged crank shaft
- Silent chain drive
- 325 lbs. Pressure

It is impossible to give an adequate description of this highly efficient machine in this limited space but we will be glad to send complete illustrated bulletins to interested parties who will take the trouble to write us.



*Manley Garage Equipment is sold by the leading Automotive Jobbers*

**MANLEY MFG. CO.**

**YORK, PA.**

**CAT. 601 - \$295**

# For "Hot Headed" Motors **Farran-oid** / *Fan Belts!*



**I**N a large majority of cases a Farran-oid belt is a permanent cure for overheating—for these belts are so flexible that they actually wrap around the pulley. They can't slip!

Dual-flex Molded "V" Type is built around an endless, stretch-proof core of heavy cord. The hollow crown enables it to grip the pulley and transmit full power. It's the most rugged, most durable fan belt made!

Herringbone Flat Type is built on a foundation of endless herringbone-woven tape, woven loose at the centre and tight at the edges to conform to crown of pulley. It won't stretch or slip. Stronger, yet more flexible—because less bulky.

These two belts—and all the other Farran-oid Products—are making good-will and building profits for thousands of wide-awake automotive merchants. Ask your jobber.

THE FARRAN-OID COMPANY, AKRON, OHIO

## **Farran-oid** *Products*

Radiator Hose • Garage Air Hose • Car Washing Hose  
 Blow Out Patches • Tire Plasters • Tube Patches  
 Combination Patches • Tire Flaps • Ford Floor Mats





# PIERCE-ARROW

*announces  
lowest prices  
in its history*

Never were Pierce-Arrow motor cars so *distinctive* and *aristocratic* as they are today. ¶ Never before has it cost so little to own and operate a Pierce-Arrow. ¶ Popular models of the Series 80 line are priced below any previous figure.

5-Passenger Brougham

Now \$2495

*-a reduction of \$500!*

The Runabout, now \$2495—*a reduction of \$400!*

Also new low prices on the 5-passenger Standard Sedan and 4-passenger Coupe

*All prices at Buffalo, N. Y., tax extra*

Pierce-Arrow Series 80 cars have hand-hammered aluminum bodies covered with 14 coats of nitro-cellulose lacquer. Luxurious appointments . . . silver finish hardware . . . handsome vanity cases. Wide range of color and upholstery choices. 70-horsepower en-

gine . . . Houdaille double-acting shock absorbers . . . special Pierce-Arrow four-wheel safety brakes. 14 to 17 miles per gallon of gasoline, 15,000 to 18,000 miles per set of tires. Nation-wide Pierce-Arrow flat-rate service effects great operating economy.

*Special Pierce-Arrow payment plan makes ownership easy*

These price reductions will naturally greatly widen Pierce-Arrow's market. In available territories dealers or other business men of unquestioned standing are invited to investigate this new sales opportunity.

THE PIERCE-ARROW MOTOR CAR COMPANY, *Buffalo, N. Y.*

# MOTOR AGE

VOL. LI

Reg. U. S. Pat. Office

NO. 16

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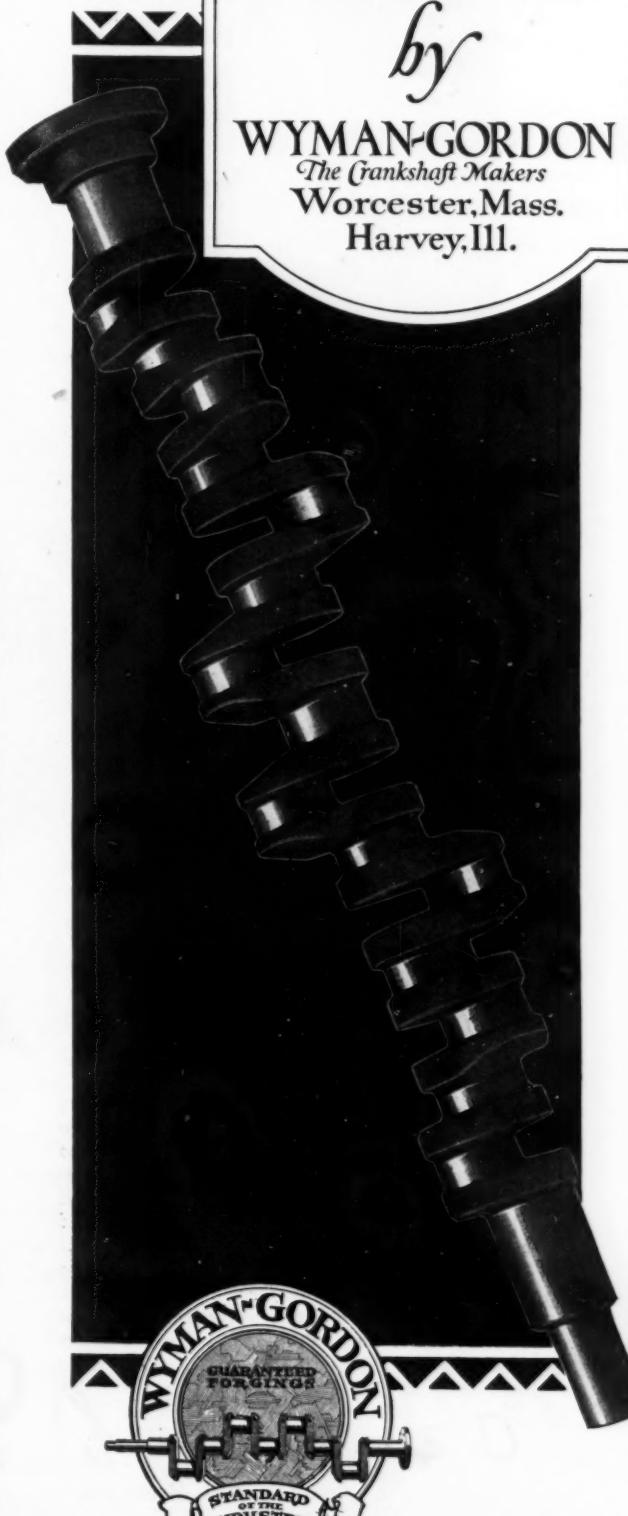
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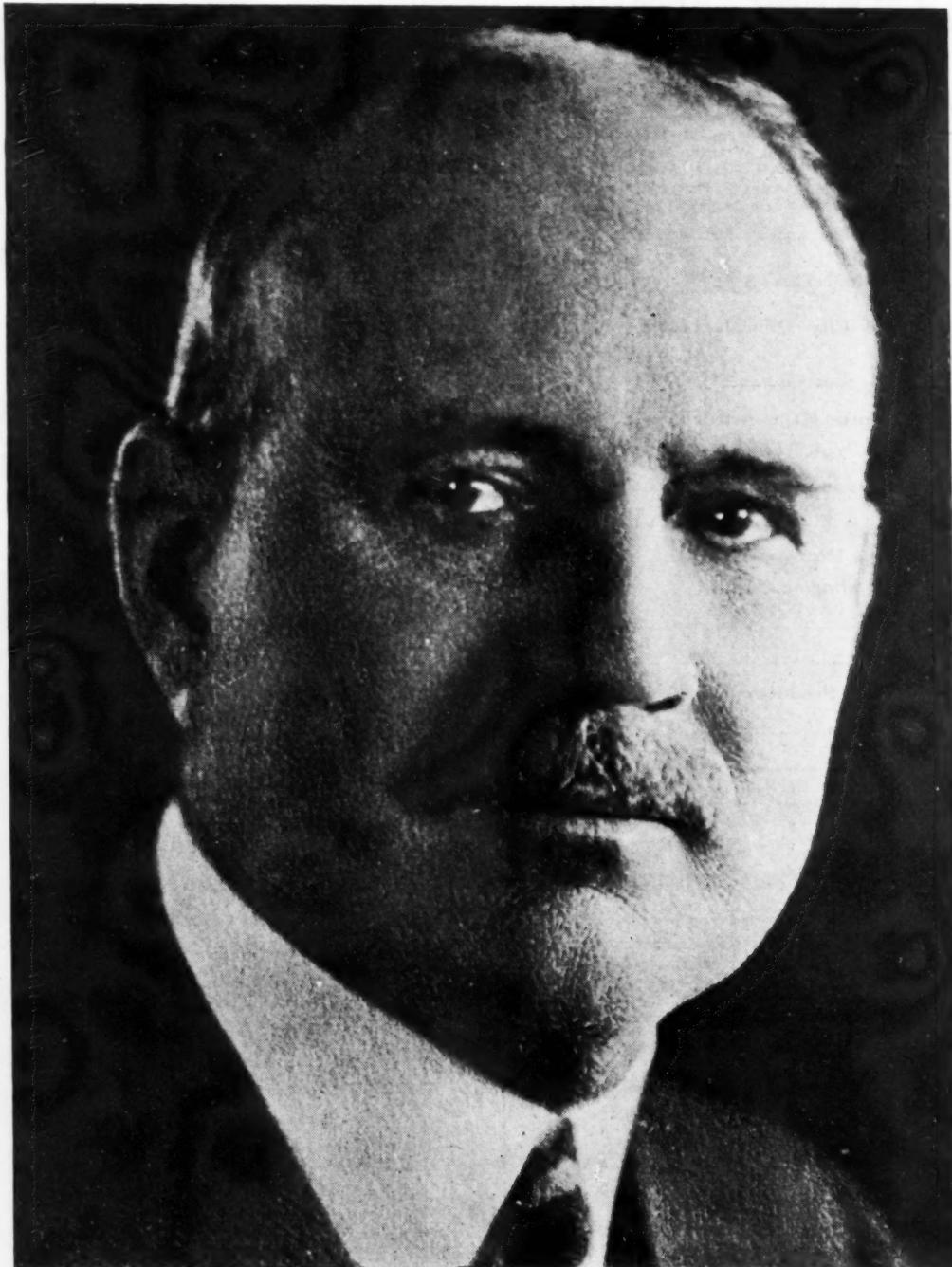
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*A Sales Point  
of  
Real Merit!*

**CRANKSHAFT***by*

**WYMAN-GORDON**  
*The Crankshaft Makers*  
 Worcester, Mass.  
 Harvey, Ill.





"About four years ago we began an advertising campaign, using larger space in The Chicago Tribune. It was something of an experiment, so we watched it closely. Sales took an immediate jump and the campaign proved so successful that for the last three years we have conducted a similar campaign in newspapers on a national scale. We have found The Chicago Tribune to be a remarkable selling force in The Chicago Territory. Since we began using large space in The Tribune, our sales have increased enormously."

C. W. Nash

President, Nash Motors Co.

In six years, Nash sales in Cook County (Chicago) increased 900 per cent.

**Chicago Tribune**

THE WORLD'S GREATEST NEWSPAPER

CIRCULATION: 765,086 daily; 1,204,240 Sunday

# *Breaking Records for Performance and Sales Everywhere*

5,000 miles in less than 5,000 minutes is the amazing new record of a stock Studebaker Commander—a closed job, fully equipped even to spare tire—on the Culver City Speedway in California. Nine other world records were set at the same time.

At Batavia, N.Y., in competition with five other makes on Burleigh Hill, The Commander won the slow-time test with an average speed of 5 miles per hour, winning also the fast test from standing start and the fast test from flying start. On a weight-carrying test, The Commander carried 17 men, weighing a total of 2794 pounds, up the hill in 29 seconds—starting at 35 miles an hour at the bottom and having 22-mile speed at the top.

In a novel test at Washington, D. C., The Commander was driven up a series of 20 steep ramps or inclines—a distance of over 1500 running feet—in one minute and 29 seconds, beating its nearest competitor by five full seconds.

That Studebaker is shattering previous records for sales is shown by its position in the three leading markets of the country:—

In New York, Studebaker registrations for March are 63% above March, 1926.

In Chicago, Studebaker registrations for March show a 26% increase over March of last year.

In Detroit and Wayne County, Michigan, Studebaker registrations for March show a gain over last year of 47%—the largest percentage of gain made by any large producer, except that of one low-priced car.

*Write or wire for information on the  
Studebaker-Erskine lines in your territory.  
Address Dept. 51, The Studebaker Cor-  
poration of America, South Bend, Indiana*

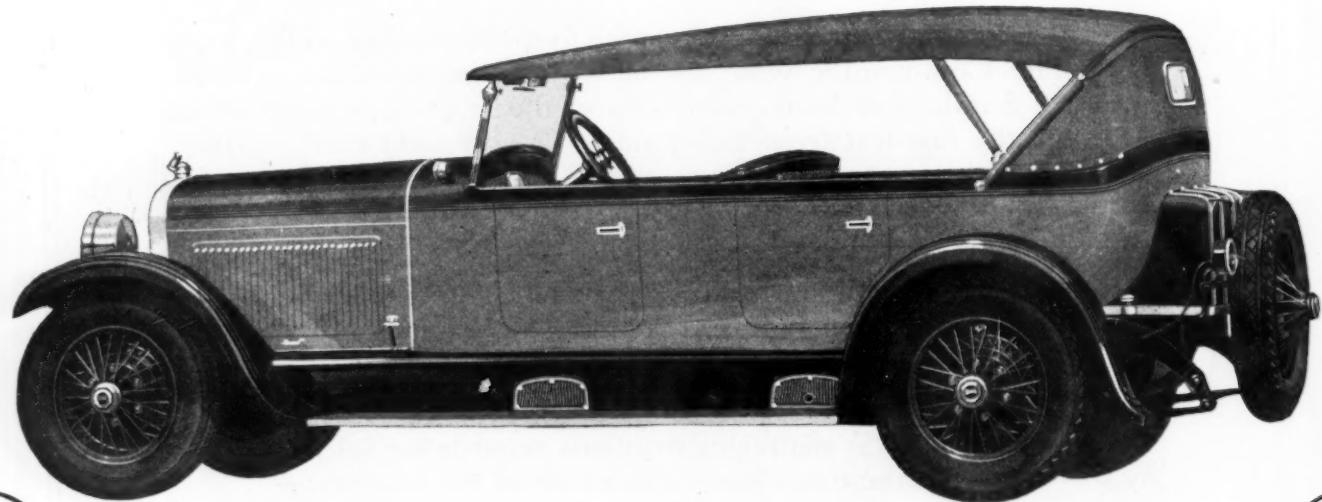
# STUDEBAKER

*This is a Studebaker Year*

# NASH

*Leads the World in Motor Car Value*

# NEW!



## Here's a New Nash Sales Attraction *The Advanced Six Sport Touring*

This is a new model created to bring Nash dealers *plus* business.

Toned in beige below the body moulding and in lustrous black above, with orange striping on the body moulding to harmonize with the orange wire wheels, which are standard equipment, this Sport Touring is an irresistibly attractive model.

It is mounted on the 127-in. wheelbase and there is a fine built-in trunk at the rear of the body. This trunk opens from the end for greater convenience.

With smaller size 20-in. wire wheels the lowness and smartness of this car immediately arrests the eye.

It is equipped with a Burbank top, with boot to match, and natural wood bow and nickel trimmings.

The steering wheel is of genuine walnut with an unusually comfortable driving grip. The instrument panel is also of

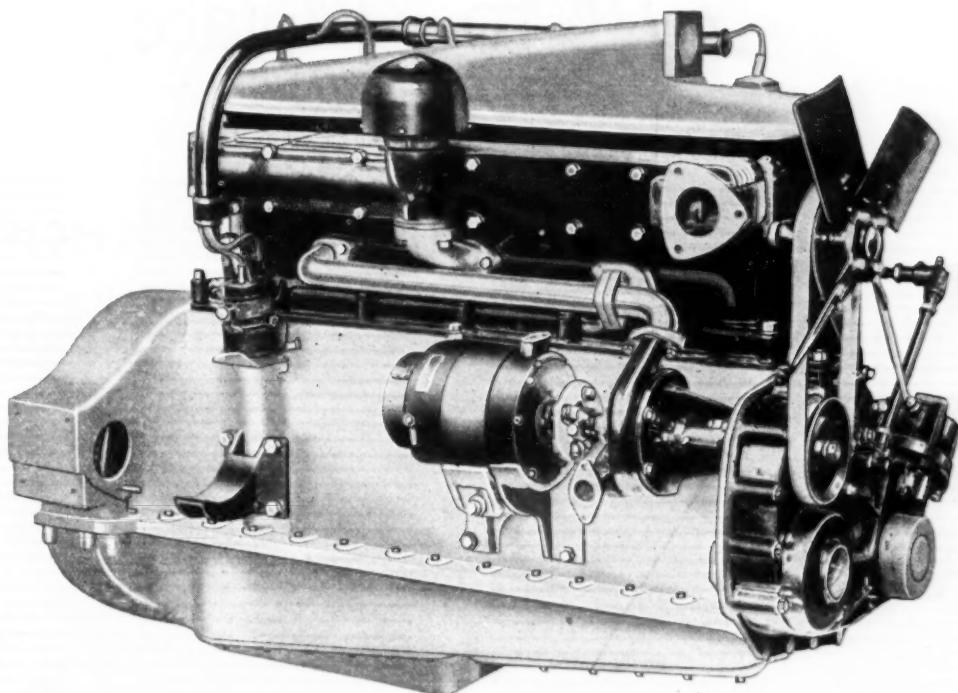
walnut finish. The distinctive untufted upholstery is of black Shark Grain leather.

Another novel feature of the car is a large locker set into the rear of the driving seat. Access to it is through the large door which opens outward into the tonneau.

The steering column is heavily nickelated, there are full nickelated headlamps and cowl lamps, nickelated radiator and radiator cap.

In harmony with the ultra quality of the appointments on this model is the new twin-tone horn fitted to the body just ahead of the front door and immediately above the fender apron.

As is true of all of the Nash models, this Sport Touring is powered with the big Nash 7-bearing motor—*the world's smoothest type*—and offers at its very moderate price such other attractions as Watson Stabilators at front, and 4-wheel brakes.



The pump and generator drive of this Yellow Coach sleeve valve bus engine employs New Departure Ball Bearings each side of the silent chain sprocket. The use of slingers in combination with an effective seal, prevents leakage of oil upon the fan pulley and pump shaft.

## How Yellow Coach Cuts Upkeep

*Low maintenance expense, fully as much as high fuel economy and low oil consumption, accounts for the low cost per mile and high efficiency of this Yellow Coach sleeve valve bus engine.*

This important consideration led Yellow Coach engineers to use New Departures in the pump and generator drive. As a result, the accurate support afforded by New Departures minimizes the attention required by the packing glands in the pump, and eliminates the necessity of replacing bush-

ings, which would add seriously to the cost of upkeep in bus service.

Wherever you find New Departure Ball Bearings in the components of any passenger car, truck or bus, you may know that its engineers have given serious thought to the matter of uninterrupted and trouble-proof performance.

The New Departure Manufacturing Company, administrative offices and main works, Bristol, Connecticut. Service stocks in 800 cities.

# New Departure Quality Ball Bearings



*27<sup>th</sup> to 4<sup>th</sup> place  
in 3 years*

1924

1925

1926

1927

*27<sup>th</sup> CHRYSLER**18<sup>th</sup> CHRYSLER**9<sup>th</sup> CHRYSLER**4<sup>th</sup> CHRYSLER*

TO REALIZE fully the increasing public preference for Chrysler, which has swept Chrysler from 27th to 4th place in three years, study Chrysler retail sales in any territory and contrast them with those of a year ago, and the year before that. You can only arrive at one conclusion — there is greater profit for you in satisfying this tremendous public enthusiasm for Chrysler.



**CHRYSLER**

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C H I C A G O ,      A P R I L 2 1 ,      1 9 2 7

## Automobile Makers and City Officials Discuss Traffic Problems

By SAM SHELTON

**A**UTOMOBILE manufacturers, city planners and traffic engineers, and municipal officials counseled together in an unusual questions-and-answers conference held last week at the Palmer House in Chicago under the auspices of the National Automobile Chamber of Commerce.

The subject was street and highway traffic and the discussions centered almost wholly around the automobile in its various relations to the economic and social welfare of the community. There was a noticeable departure from the suggestions of restrictive control of motor vehicles such as used to feature any gathering of this kind, and a distinct turning of able minds toward the matter of facilitating the movement of passenger cars and trucks for the greater convenience and safety of the public.

The same attitude marked the traffic session of the Chicago section of the Society of Automotive Engineers held on the evening preceding the opening of the N. A. C. C. conference.

These conferences revealed that city authorities and planners are deeply concerned with providing for the adequate movement of motor vehicles 10 and 25 years from now and that they consider many of the regulations of today experimental and temporary. It was shown that the prohibition of parking is almost as difficult of enforcement as another well-known type of prohibition.

It was shown that the speed problem in the down town and congested business areas of large cities is not one of restriction but rather of getting vehicles through at an average rate of better than 6 to 10 miles an hour. Nowhere are city streets being made to carry the maximum volume of motor traffic that they are capable of, the authorities agreed, and Miller McClintock, director of the Albert Russell Erskine Bureau for Street Traffic Research, told how a new system of control put in effect in Los Angeles following a traffic survey has resulted in a 50 per cent increase in traffic with a 20 per cent reduction in accidents.

Traffic control by signal lights was discussed and it was generally agreed that where such lights are installed and operated in accordance with a careful study of the requirements the results are good, but that often such lights merely serve to slow up and confuse traffic. At the S. A. E. meeting Carroll E. Robb of the National Safety Council stated that the synchronized traffic lights on Euclid avenue in Cleveland and on Michigan boule-

vard in Chicago have actually slowed up traffic, but that the progressive light signal system used in the Chicago loop has speeded it up and greatly increased the capacity of the streets. He cited observations made by representatives of the Safety Council and the Chicago Surface Lines to substantiate this statement.

The presiding officers of the three sessions of the N. A. C. C. conference were Edward S. Jordan, president Jordan Motor Car Co.; P. L. Emmerson, Yellow Truck & Coach Mfg. Co., and Alvan Macauley, president Packard Motor Car Co. These executives were among the interested cross-questioners of the speakers who included Miller McClintock, E. J. McIlraith of the Chicago Surface Lines; J. Rowland Bibbins, consulting engineer, Washington, D. C.; Eugene S. Taylor, manager Chicago Plan Commission; Robert Kingery, Chicago Regional Planning Association; H. B. Peabody, Detroit Garages, Inc., and Judge Charles L. Bartlett of Detroit.

Mr. McClintock, who has conducted traffic surveys in Los Angeles and Chicago and is now conducting such a survey in Boston, explained how cities, large or small, should go about organizing a traffic survey and told how much such surveys have cost in other cities. In Los Angeles, where a very complete survey was made, the cost was \$30,000, but this was kept low by using boy scouts almost exclusively to make the required counts. Boston has provided \$25,000 for its survey and San Francisco is planning to spend an equal amount. In Chicago \$70,000 was spent in making the detailed traffic counts and analyses which formed the basis of the report and recommendations submitted by Mr. McClintock.

The essentials of a traffic survey, according to Mr. McClintock, are:

1. Count vehicles at points of greatest traffic flow. In smaller cities counts made between the hours of 8 and 10 a. m. and 4 and 6 p. m. are sufficient. In Chicago the count was continuous from 7 a. m. to 11 p. m.

2. Analyze the points of congestion as to kinds of traffic, origin, destination and other factor.

3. Make an accident survey based on statistical report covering continuous period for as long a time as it is available.

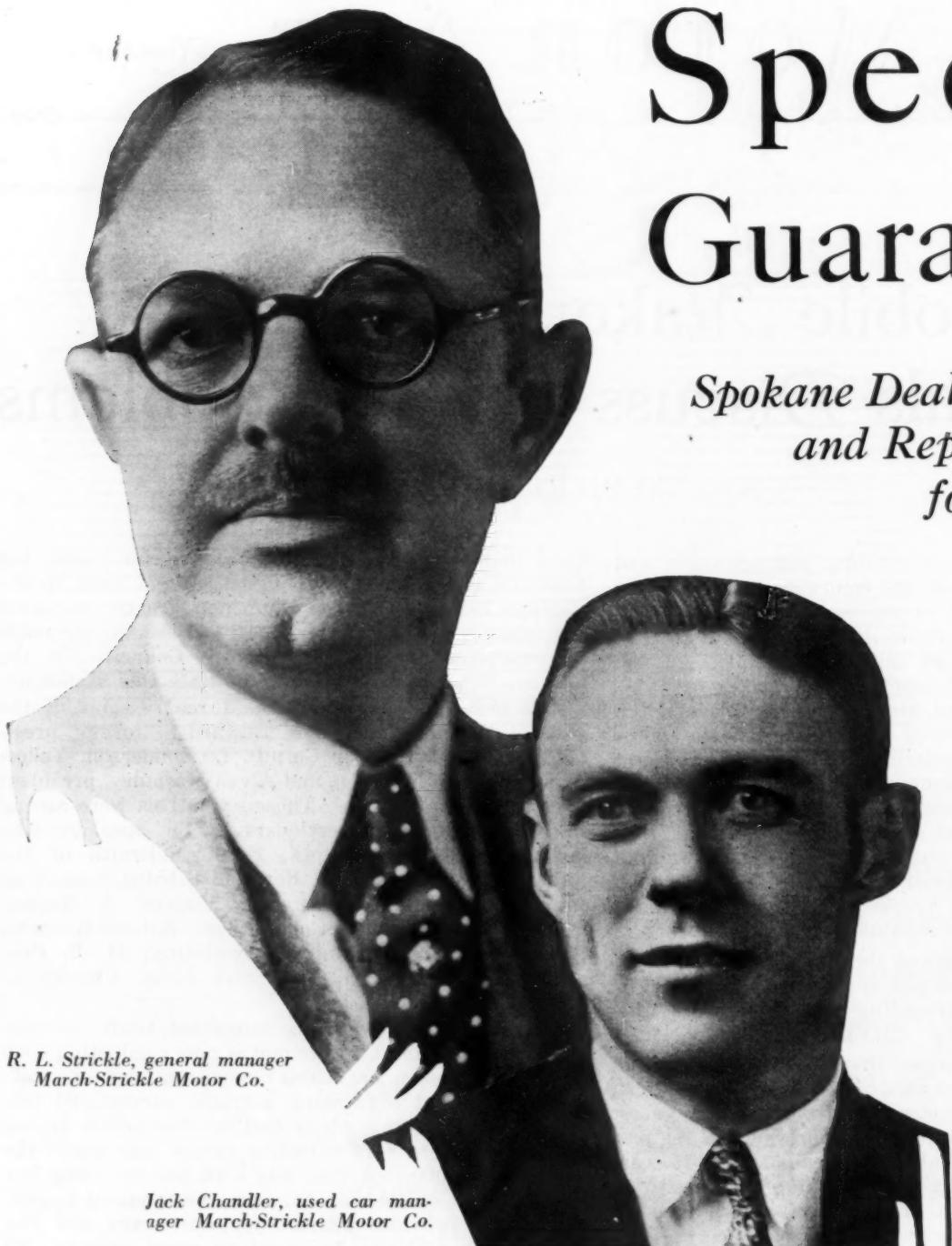
4. Study parking and where it is found that street storage interferes with activity storage must give way.

(Continued on page 20)

# Special Guarantee

*Spokane Dealer Gets Good  
and Repainting Cars  
fore Offering*

By A.



R. L. Strickle, general manager  
March-Strickle Motor Co.

Jack Chandler, used car man-  
ager March-Strickle Motor Co.

**W**HEN the March-Strickle Motor Company of Spokane, Washington, Star distributors, decided to solve its used car problem the situation was carefully analyzed with the result that a plan was evolved which proved of such benefit that within 30 days of its introduction that one of the two used car lots of the firm was closed and placarded with a sign telling prospective purchasers that stocks had been reduced so as to make necessary advertising for more good used cars.

A used car guarantee, organization of a used car service department where thorough reconditioning is given the cars and careful management of the department brought these results.

The used car guarantee in itself is really nothing so novel in used car merchandising now-a-days but with the backing of a firm that for 10 years has been mer-

chandising automobiles in Spokane the announcement of a guarantee, supported by judicious newspaper advertising, brought quick response.

Careful consideration was given the drawing up of the guarantee form—it is actually less than 150 words in length. R. L. Strickle, vice-president and general manager of the firm, took into consideration the type of man who might be called the average used car buyer. Very often he is a man of little experience in buying cars or of little education. There are, for example, thousands of

lumberjacks, miners, and farm workers in the territory adjacent to Spokane who are in the habit of coming to the city for their few days or few weeks pleasure and very often these men shop around automobile row and drive back to their jobs in a moderately priced used car. These men aren't in the habit of studying through an intricately drawn contract. Absence of fine print clauses, and wording understandable to every buyer is what the used car buyer would appreciate, it was argued. The instant response and increase of sales demonstrated that this analysis was correct.

"The guarantee covers all mechanical parts in the entire chassis for 30 days and the battery for 90 days," Mr. Strickle explained. "Where something goes wrong and the purchaser comes back we create a friendly feeling by seeing that everything is made right."

"The used car buyer has been gypped so often that it

# Used Car *Helps SELL Them*

## *Results by Reconditioning Taken in Trade Be- Them for Sale*

NIX

sometimes seems to be a new experience to him to be treated fairly on used car deals. Six months operation under the guarantee shows that our analysis of the best way to create greater confidence in the used car department's merchandising methods was correct.

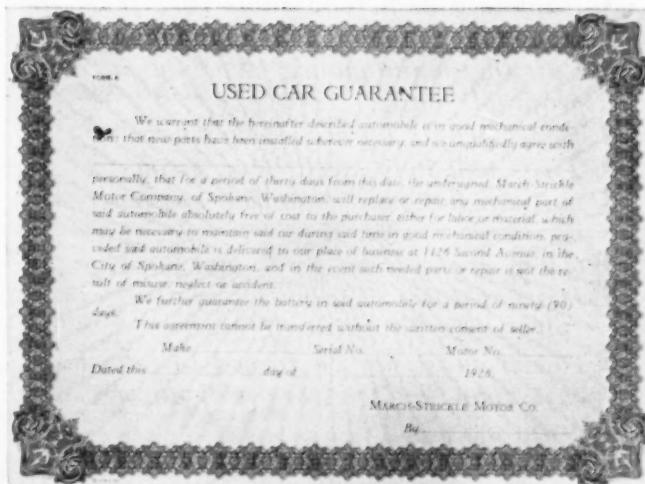
"The plan went into effect about May 1. At that time we had on hand 86 used cars. In 30 days the stock had been reduced to 36 units—having sold 50 units plus the number of cars taken in during the month on trade-ins. Stock was so low that we advertised for more used cars so as to have a better selection to offer prospects.

"Of course we could not stand back of a guarantee unless we put our used stock into good condition. To assure proper reconditioning we established a special used car service department. We have our own battery shop and also a top shop. All side curtains are fixed up and fasteners and snaps put on wherever needed and in the mechanical end we do not limit ourselves merely to grinding the valves and making a few adjustments. Wherever mechanical attention is needed it is given before offering the car for sale.

"The paint shop, perhaps, is the biggest asset of the department. We get out a paint job in 24 hours, whereas outside paint firms often take a week or 10 days. As a result cars are made available for sale within a short time after taken in. Lacquer is used exclusively in repainting cars, assuring a durable finish such as cannot be given on a cheap ordinary paint job."

A great deal of the success of any merchandising plan lies in the human element. In this the March-Strickle firm is favored with having a salesman of demonstrated ability in charge of used car sales. He is Jack Chandler, who has been on the sales force of the company for three years and two months previous to adoption of the guarantee plan was made used car manager.

Normally Mr. Chandler has four salesmen to help him. However, the firm has established a rule that all salesmen cooperate in moving used cars, the new car salesman often having an opportunity to learn that his prospect would be better served with a used car and thus being able to assist him in selecting a used car.



The simplified guarantee used by March-Strickle Motor Co. for used cars

While the firm has gone a far way towards solving its used car problem, Mr. Strickle admits that there are still difficulties to be overcome. The main difficulty is in the matter of open cars.

"Dealers must be very careful of used open cars," he warns. "Unless they are very careful they are likely to be burned on this type of car."

"It is really a matter of educating the public that the fellow who owns an open car has something for which the market is getting more and more limited. So far as our firm is concerned the general used car problem is pretty well licked but as to open cars we still have to be very careful."

## U. S. Expert Outlines 17 Storage Battery Trouble Sources

The "17 common sources of trouble in connection with the use of storage batteries" have been outlined by George W. Vinal, chief of the Electromechanical Section of the United States Bureau of Standards, as follows:

Overcharging, undercharging, difficulties with the charging system, corroded terminals, cracked or broken jars, short circuits, worn-out plates, electrolyte below the tops of plates, freezing, impurities in solution, chipping of the active material, excessive sulphurization, corrosion of the grid, reversal of the positive and negative plates, growth of the positive plates, shrinkage of the negative and explosions of the batteries when coming in contact with a flame or spark of fire.

# Many Dealers Favor

## MOTOR AGE Platform for Greater Dealer Profits

- ¶ More net profit per dollar of sales.
- ¶ Elimination of used car losses.
- ¶ Make the used car a profit producer.
- ¶ Eliminate unmerchantable cars from the trade.
- ¶ Put the maintenance department on a profitable basis.
- ¶ Boost profits by accessory sales.
- ¶ Tires will help swell your profits.
- ¶ A Fair flat rate plan for customer and mechanic.
- ¶ Get a profit from parts and supplies.
- ¶ Develop sales possibilities of territory to full extent.
- ¶ Dealer must not be forced to take more cars than his territory will absorb at a profit.

LETTERS from dealers on the used car question continue to come to MOTOR AGE. Many of these letters deal directly with the proposal that old cars that are so disreputable or obsolete that they have no merchantable value should be broken up and permanently removed from use.

These discussions are of great value to the whole industry. In these letters dealers have made suggestions that apply both to dealers and manufacturers. Following are more letters:

*From M. L. Heminway, Manager The Motor & Accessory Manufacturers' Association, New York, N. Y.*

THE question you raise as to whether we shall scrap the older used cars is an interesting and important one.

My personal feeling is that the industry and the public would profit by a program of scrapping, but I have not given much thought as to the method. I believe that a plan could be worked out along intelligent lines and feel that it would be well to make an effort in this direction.

I think statistics would show that old cars which are not in proper condition are responsible for many accidents. Many cars which should properly be scrapped are purchased at low prices by irresponsible people and without much at stake driven recklessly, carelessly and without proper consideration of others.

*From Frank Botterill, The Botterill Automobile Co., Salt Lake City, Utah. (Hudson-Essex)*

IT would be a wonderful thing if a plan could be worked out for the systematic scrapping or elimination of the older and absolutely unsalable used cars from the market, but I really believe, that this question is taking care of itself automatically.

Our experience in this territory is that there is hardly any automobile dealer left who will make an allowance of more than "junk" price on orphan or really unsalable old cars, and the usual procedure when one of these cars is presented for trade, is that the dealer calls the junk company for a price on such a car, and that is very generally what is allowed to the owner.

I think if a careful investigation all over this country could be made there would be some very surprising figures

*In Letters to MOTOR AGE They and Offer Suggestions for Cars Off*

on the number of old cars that are being constantly junks.

Frankly, I really believe the situation will take care of itself.

*From H. F. Hortsman, President Alton Automobile Co., Alton, Ill. (Ford-Lincoln).*

WE have given this matter serious thought for the past four years and it has been our policy to scrap every car that would not have an actual appraised value of \$35 or more and when I say actual appraised value I mean the salvage value after reconditioning and handling charges have been deducted.

We do not recondition cars selling for less than \$100. All cars should be junks that cannot be put in good salable condition at a fair margin of profit to the dealer and a good value to the customer. Provision for reimbursing the dealer should be taken care of by the manufacturer.

The used car situation in this locality is at its worst at this time and I do hope that some of the car dealers will wake up to the fact that they are not conducting a charitable organization for the auto buyer.

*From G. W. Rogers, The Platt-Fawcett Motor Co., Denver, Colo. (Paige)*

WE dont need to worry about the old cars being junks when it is time. No dealer is going to put the necessary repairs into a car that he knows he is not going to be able to sell at a price that at least will give him his money back.

We believe that our task is in educating dealers in the art of buying used cars so that they can be sold at a profit. At present we go out of our way to bid against each other for a lot of merchandise (used cars) that none of us want to buy and is very hard to sell.

We think that our salvation is in the bookkeeping system. If we will keep our books in such a way that costs are shown and profit (or loss) worked out on some of the deals that we make, there will not be so much wild buying of used cars which show when the sale is consummated that we have put another new car on the streets and that's all.

We trust that your campaign will result in an improvement in this branch of business.

*From Frank H. Gibbes, Gibbes Machinery Co., Columbia, S. C.*

OF course worthless used cars should be scrapped and gotten off of the market, and the sooner the better for all concerned. It is hard to draw the line as to when to do the scrapping, as far as age is concerned. It is a matter of efficient service. The quicker the dealers reach a decision to scrap cars that it will not be to the interest of their prospects to buy, the better it will be for all concerned, but this is not going to solve the used car problem which confronts us all the time and is an increasing menace to the welfare, not only of the individual dealer, but of the industry as a whole. Relief from these intolerable conditions must start at the factory. Big production programs, strenuous sales methods, regardless of the welfare of the retail office, will eventually kill the goose that lays the golden egg, if measures are not taken at the source to correct the wrong practices that exist. One of the first steps that should be taken by all manufacturers is to get rid of the undesirable dealer who over trades and ruins the legitimate market for those who are seriously and earnestly in the business to build up a dependable and continuous outlet for the manufacturers.

Pardon such a long letter, but you know how it is. Enough can ever be said on the subject.

By all means scrap the worthless old junk heaps.

# Scrappling Old Cars

*Commend Greater Profit Platform  
Getting Unmerchantable  
the Streets*

*From R. G. Coon, manager Coon Auto Co., Sioux Falls, S. Dak. (Ford-Lincoln).*

**Y**OU ask "Shall we scrap the older used cars?" There have been so many plans offered in the solution of the used car situation that we don't know of another new one. A great many of those plans offered could have solved the problem but the dealer himself was only to blame. He just wouldn't do it; could not stand pat because he couldn't believe his competitor, and it still goes on but with considerable improvement. Our theory has always been that any dealer should forget that he has any competitor and buy his used cars with the same business judgment that he used in buying new cars. If every one could only do this there wouldn't be any used car problem, but I guess this is not possible.

You know we Ford dealers have tried to do this for the past two years and it has cost us some new car sales. Nevertheless, they will all have to come to it some day if they expect to stay in the picture.

The scrapping of old cars in certain condition would not only help the industry but every one in it, including the car owner himself, but believe this must first be recognized by the car manufacturers with some recommendations to their dealers. A great many ills of the dealers originate by factory policies and unless all manufacturers can arrive at some constructive plan on how far and how long a dealer can be expected to buy transportation when there is none left in a car in order to sell their new products, then they cannot expect much systematic scrapping of such cars by the dealer himself.

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*From K. K. Burkhart, sales manager,  
Manley Auto Co., Portland, Oregon.  
(Chandler.)*

Re "Eliminating the Unmerchantable car from the trade."

I have read these articles with a great deal of interest. Cars of this type are the cause of the large percentage of loss on used car merchandising. To eliminate these and only handle late model used cars in good trade-in condition is solving the most serious phase of your used car situation.

We find that the merchandising of clean used cars is little different from our new car business. For some time back, we have only been handling these older cars at junk prices for say a maximum of \$50, and immediately selling them to a junk man. We require from him an affidavit that he will dismantle the car at once. Of course, he offers the used parts for sale, but it at least takes the automobile off the market. Such cars, if allowed to remain on the market, are, as you say, an actual menace to public safety and without exception are sold to people of unreliable standing.

Keep up your articles and we will all derive new ideas on a very essential topic.

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## NEXT WEEK What's Your Quota?

**A**DEALER wrote to MOTOR AGE that he believes every dealer should have his quota of old cars to scrap just as he has his quota of new cars to sell. He asked us to write an article about it. And we have done it. John C. Gourlie of the Chilton Class Journal staff shows just how it would work and the article will be published in next week's issue of MOTOR AGE.

*From M. D. Kidder, manager Myron D. Kidder, Inc., Portland, Me. (Reo).*

**I**SHOULD judge that the fourth plank in your platform is cut from knurled oak. It surely looks like a tough one to me.

During the past six or eight years about the only instances in which we have gracefully, and may I say, cheerfully—taken something of a loss on used cars traded in, has been when we have sold one of these antiquities to the junk man at something less than what we allowed for it. Along with this kind of transaction is the great satisfaction of at least believing that it will never show up again. I suppose that there are junk men unscrupulous enough to take some of these relics into their stock of salable merchandise, but at least we are soothed by the thought that they have forever passed out of the picture.

We believe that the most unpolitic thing a dealer can do is to sell such merchandise to the public. There is another satisfaction in that every time we scrap one of these birds, we are creating public good will by safe-guarding the buying public from the possibility of ever purchasing it.

We have steadfastly refused to put junk into our stock of merchandise at any price. A car to be offered for sale by us, must measure up to a certain standard of potential transportation service and must meet a certain standard of appearance. It is a long, hard job to educate all the dealers to recognize the sound economics of a policy of this kind. They do not hesitate to allow 100 more for a used car in the \$500 to \$1000 class than they can sell it for, but to sell a unit which they have allowed \$150 for to the junk man for \$50 to \$75, is to many dealers inconceivable.

I am not entirely clear as to what you mean by "Systematic Scrapping of such cars." I am sure that some system for scrapping unserviceable units would prove a great advantage to the industry.

I shall be interested to know what, if anything, develops as a result of your investigation in this matter.

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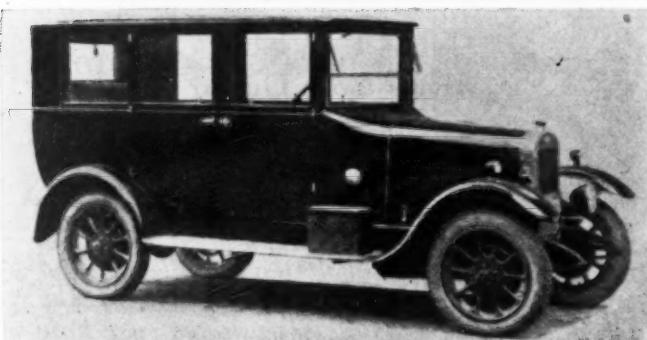
*From C. E. Enfield, Enfield-Norfleet, Inc., Roanoke, Va.  
(Dodge Brothers)*

**W**E appreciate your invitation to comment on the problem of scrapping old used cars. We have for a long time had an idea that this would be the final solution of a great many of the dealers' problems, and have at various times suggested to the factory that they permit the dealer to add \$10 or \$15 to every new car sold and when this fund would reach \$50 to \$100, use it to take care of the scrapping of one or more old cars which should be put out of commission.

We are heartily in sympathy with any movement of this sort and feel reasonably assured that there can be some satisfactory plan devised to take care of it.

*(Continued on page 20)*

# The Light Car in



The 11 h.p. Clyno sedan. The wheelbase is 105 in., tread 48 in., overall length 154 in., overall width 61 in., road clearance 9 in. and tires size 27 in. by 4 1/2 in.

**S**O much has been said about European models that it should be of interest to consider the details of the English light car as brought out by Alan R. Fenn, of the Sunbeam-Talbot-Darracq Combine, London, England, in a paper presented for the annual meeting of the Society of Automotive Engineers.

In tracing the developments of the light car, Mr. Fenn mentioned the types made in 1898 which were notoriously unreliable. In the effort to get some degree of reliability Mercedes brought out a fairly heavy car which was copied and became the general style of automobile up to 1911 when cycle cars made their appearance. These were obviously failures from the outset and met with poor reception, but in their place there sprang up a better type of car having the reliability of the heavier model without its cumbersome features.

The term "light car" is difficult to define although any one familiar with the automotive industry has a fairly definite idea of what he means by the term. As generally accepted in Europe it refers to a car having an engine with cubic inch piston displacement of 91.5 or less, the actual weight of the automobile varying considerably in this classification. Factors which have influenced the design of these cars are primarily the heavy tax which is one pound or \$4.86 per hp. in England. Another factor is the smooth surface and winding nature of the roads which limit ultimate speeds to approximately 40 m.p.h., thus making acceleration up to that point a paramount feature of the design. Although 91.5 cu. in. is designated as the limit for cu. in. displacement of the light car, it does not mean that all light cars have this much cylinder capacity. Up to 1914 the English light car had from two to four cylinders and the average capacity was 61 cu. in. This car was usually a 2 seater, a typical illustration being the 10 hp. Morris of 1914. The engine had a capacity of 67.1 cu. in. and the car ready for the road weighed 1,100 lbs. It had a speed of from 40 to 50 miles per hour and a gasoline consumption of 35 miles per gallon.

## Gear Shifting Necessary

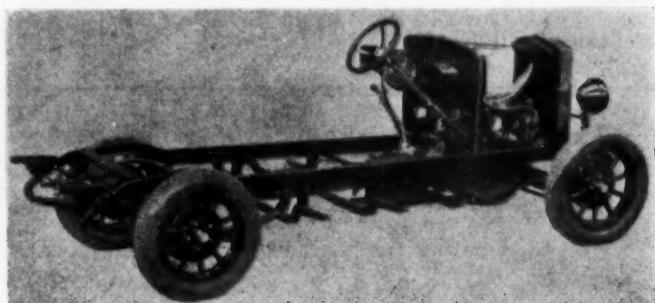
In the use of cars of this type there is perhaps not the objection to gear shifting in England that exists in the United States where a car is expected to perform

*British Manufacturer Gives Interesting Data on Performance and Design of Vehicles That Have 91.5 Cu. In. or Less of Piston Displacement*

at practically all speeds in high gear. Experience gained in designing aircraft made it possible to increase engine efficiency after the World War so that we find the effective scale of engine revolutions lengthened by increasing the compression ratio, stiffening crank-shaft and lightening reciprocating parts. Referring again to the definition of a light car it is interesting to note that the Ford does not fall within this classification, although its weight is considerably less than many English vehicles which are rated as light cars. The same thing applies to the Essex.

For purposes of comparison there follows a schedule of the actual weights of some of the leading European light cars of 91.5 cu. in. or less, these weights representing the car as a standard phaeton, except in the case of the Austin which is known as "an occasional four" and the Amilcar which is a sporting two passenger vehicle, in normal running condition and ready for the road:

Car	Size Hp.	Weight, Lb.
Austin	7	950
Amilcar	9	1,320



Chassis of the 11 h.p. Morris-Cowley car

Renault	9-15	1,350
Trojan	10	1,460
A. C.	12-24	1,680
Clyno	11	1,800
Rover	9-20	1,800
Singer	10-28	1,800
Fiat	9	1,800
Wolseley	11-22	1,900
Morris	11.9	2,020
Fiat	10-15	2,240

## Good Roads Help Light Car

As compared with the above table the Essex as turned out for use on ordinary British roads in the form of a Standard five passenger car weighs 2,300 lb., while the Ford phaeton weighs approximately 1,800 lbs. Except for the Austin which is 45.7 cu. in. capacity and the Amilcar which is of 67.1 cu. in. capacity and the 9 hp. Fiat which is of 60.0 cu. in. capacity all the automobiles in the above list are approximately 91.5 cu. in.

In referring to the good roads which have been a factor in the development of the light car, it is interesting to note that the sum of approximately \$5,000,000

# England

per week is spent in making and repairing roads in Britain. After the World War manufacturers turned to the production of the light car on account of the economic situation which demanded a vehicle low in first cost and comparatively inexpensive to operate. More recently factors which have aided its development are features of engineering design gained from racing experience.

There is another class of car which might be designated as the ultra-light car, one of these being the 7 hp. Austin and another the 7-12 hp. Peugeot. While the output of the Austin is not large as compared with American standards, still it is a substantial production according to British ideas and the demand for this type is steadily increasing. Although adapted primarily to excellent roads such as are found in England it is interesting to note that the Austin is finding a continually increasing demand for export purposes.

The prices of some of the more prominent light cars on the British market are as follows:

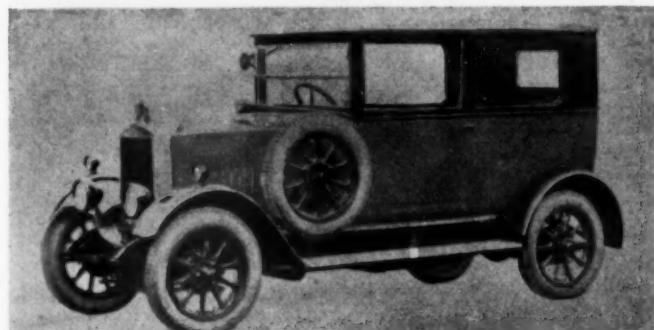
<b>Austin</b>	<b>\$703.25</b>
<b>Citroen</b>	<b>\$800.25</b>
<b>Morris Cowley</b>	<b>\$836.60</b>
<b>Clyno</b>	<b>\$836.60</b>
<b>Renault</b>	<b>\$960.30</b>
<b>Swift</b>	<b>1,018.50</b>
<b>9-hp. Fiat</b>	<b>1,042.75</b>
<b>10-26 hp. Singer</b>	<b>1,067.00</b>
<b>Rover</b>	<b>1,164.00</b>
<b>10-15 hp. Fiat</b>	<b>1,430.00</b>
<b>A. C.</b>	<b>1,615.00</b>
<b>Talbot</b>	<b>1,915.00</b>
<b>Alvis</b>	<b>2,182.50</b>
<b>Riley</b>	<b>2,206.75</b>
<b>Bugatti</b>	<b>2,255.25</b>

There are also some light cars that go still higher in price, although these are of a distinctly specialized nature. It is interesting to note that a car costing between \$2,000 and \$2,500 is still in great demand in England and in the British Dominion and, although equipped with an engine rated at 12 hp., is capable of a road speed of well over 60 miles per hour on the level.

## Use Four Speed Transmissions

A typical English light car and one of the most popular is the Morris Cowley. This car has an engine of 91.8 cu. in. capacity and accordingly is not technically within the definition of a light car by a matter of .35 cu. in. This car has 11.9 rated horsepower and uses an engine of the four cylinder type with cylinders cast en bloc. The cylinder head is detachable and the bore and stroke are approximately 2.71 in. and 4.01 in.,

*The Morris-Cowley 11 h.p. "Saloon" type. The wheelbase is 105 in., tread 48 in., overall length 132 in., overall width 60 in., road clearance 8 1/4 in. and tire size 27 in. by 4.4 in.*



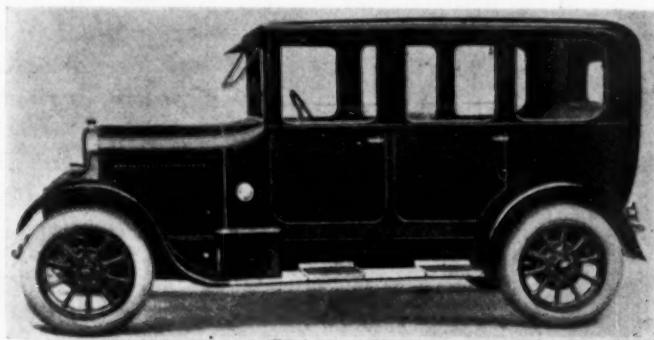
April 21, 1927

## Specimen Performance of European Light Cars

Make of Car A. B. C.*	Horse- power 12-40	Bore and Stroke, in. 3.71 x 3.60	Capacity Cu. In. 79.3	Body Two Passenger	Maximum Speeds on High and Gears, M.P.H. 67, 47, 30, 20	Miles from 100 Miles per Hour, Sec. 9, 6, 6	Gear Ratio 102	Accelerating and Stopping from Distance in Feet		Total Weight, Lbs. 1,716
								Miles from 100 Miles per Hour, Sec. 9, 6, 6	Gear Ratio 102	
Standard Hampton	11 12	2.60 x 3.45 2.70 x 3.90	79.7 91.25	Phaeton Phaeton	48, 32, 14 52, 42, 27, 16	17.6, 12 17.10	171 106	20, 8.7, 4.6 16.68,	1,860 1,960	10.5
Fiat	10-15	2.68 x 4.00	88.45	Phaeton	50, 33, 25, 14	15.2, 9.2	183	6.45 12.83	2,520	6.111
Talbot	10-23	2.35 x 3.70	65.6	Phaeton	53, 40, 20	18.4, 9.4	139	19.5 9.35, 5.11	1,848	8.94, 5.11
Seneschal Fiat	8 7	2.39 x 3.90 2.20 x 3.73	67.1 60.39	Phaeton Saloon	50.9, 37, 22 48, 30, 16	15.9, 6 14.8, 13.8	63 133	13, 8, 4 20.075, 12.500	1,628 2,156	12.500
Citroen	11.4	2.68 x 3.90	88.63	Phaeton	48, 30, 16	17.14	151	4.6 4.8	2,184 2,072	16.5, 5.8, 4.8
Clyno	11	2.60 x 3.90	83.5	Phaeton	50, 32, 17	17.5, 14.5	107	16.5, 8.9, 4.8	2,020	15.2, 8.17, 4.75
Morris	11.9	2.70 x 4.00	91.8	Phaeton	50, 35, 18	17, 12	103			

\* All cars are fitted with only two-wheel brakes.  
Allowing for two passengers of total weight of 236 lbs.  
The A. B. C. Super-Sports is a two-cylinder air-cooled engine.

respectively. Three main bearings are used and the valves are arranged side by side, the camshaft being driven by spiral gears in the conventional manner. A single plate cork faced clutch is used and the clutch, transmission and engine are built in one unit. There



The 10-26 h.p. Singer sedan which sells for \$1261

are three speeds forward and one reverse. Final drive is through spiral bevel gears, a conventional torque tube construction being used on the axle. Semi-elliptic springs and friction type shock absorbers are used. Steel artillery type demountable wheels are fitted. Brakes operate on the front wheels. Cooling is by means of the thermo-syphon system and electrical system comprises magneto with a single unit generator and starter. The car is capable of speeds over 50 miles an hour and may be expected to do about 35 miles per gallon under normal running conditions.

In England four speed transmissions are more popular than the three speed type, the only objection being the increased cost. On the other hand it is interesting to note that even with the small engine size, that cars such as the Morris-Cowley sedan and the Clyno and Singer sedans will, when intelligently driven, do 90 per cent of their running on high gear.

Rear axle ratios vary from 5.9 to 4.7. In addition to the more or less conventional type of light car it is interesting to note two others, the Trojan and the Constantinesco. The former is equipped with a two cylinder two stroke engine, 2 1/2 by 4 1/2 in. and is rated at 10 hp., having a capacity of 90.7 cu. in. It has a two speed and reverse epicyclic gear with final drive by chain. In spite of its unusual design, the Trojan has a very strong market in Great Britain, as a foolproof, extremely economical and sound, general utility car

(Continued on page 28)

# The Salesman Must Guard His Words

*He May Speculate in the Most Rose-Hued Terms Upon the Probable Advantages of His Product, but His Representations of Fact Must Be True*

By WELLINGTON GUSTIN

IT appears that most industries go through a period of high pressure salesmanship, others never get through the period and others could not exist without it. Real estate subdivision agencies seem to thrive on or by this high pressure work, and as soon as this grows lax, the sales grow slack. This is due, no doubt, to the underlying fact that an interest must be created among buyers and to the further fact that the alleged values of the property sold are not as high as the oily tongued salesman may have painted them. Under the spell of high pressure work the good judgment of the prospect is overcome. With the spell broken the prospect refuses to buy, and the developers fail in their project.

But a permanent business cannot be built on high pressure work alone. Value or service must be included. A business may succeed for a period solely through a good sales force, but such a force must ultimately fail with a poorer product than that of competitors, or if it fails to render proper service.

## *High Pressure Success Is Temporary*

There was a time when high pressure salesmen were needed—at least useful—in the automotive industry. That time was when the companies were pioneering and introducing their product. They may aid today when a product is unknown. But generally they are only of a temporary advantage at the most in the automotive industry today. For their views, seen through rose-colored glasses, are dispelled in the intelligent light of facts. Their promises are quickly tested and detested, the erroneous or careless statements are disproved and their methods passed on to one's friends.

With automotive engineering principles becoming generally known and standardized among manufacturers, the products and parts more or less standardized, the salesmanship must get down to value of the product and service to be secured by the purchaser in order to survive.

And to survive the salesman must know his product. The more he knows about his competitive products the better. Unless he knows his product he cannot know its value; and unless he knows his competitor's product he cannot know their relative values. One who knows prices only must of necessity be a haphazard salesman; haphazard because he may strike a prospect who buys from the price only, in which case he is lucky, but in any case he hazards his employer's busi-

## **Make the Law Your Friend**

*Every good business man wants to avoid contests at law. It is not always possible to avoid resort to the courts, but the man who applies the Golden Rule in his business and who knows some of the fundamental principles of the law will go a long way toward keeping out of expensive litigation. In this article Mr. Gustin gives some of the general principles of the law applying to sales.*

ness in competition with perhaps salesmanship of knowledge.

Again, knowledge of the product sold and its intrinsic value should be supplemented with the service to be had. Now service as here used has nothing to do with the technical term used by dealers and manufacturers for repairing and replacing their product. Rather it is that thing which benefits the buyer. It is an all inclusive term.

Business not built upon service in this sense is an economic loss to society. The automotive industry has proved to be the most valuable industry giving the greatest wealth because of rendering the greatest service to society that man has known. If this be true we have failed for ages to realize the tremendous importance of transportation. The varied and myriad advantages in this field might be de-

tailed and all found helpful to the automotive salesman, but cannot be set out here. However, some of these apply to every buyer of an automobile. Strictly, in the broad advantage, one should not be sold an automobile unless the buyer can get a service from it superior to what he exchanged for it. And the exchange should be for the benefit of both parties. The increase in wealth of the country and the people traceable to the automotive industry proves that, as a whole, both parties have been rendered a service or that both benefitted from the purchase and sale.

A good salesman will study his prospect and set out the facts of the possible service to be had by the purchaser. He has herein a wide and valuable field for constructing his sales talk. Rose-hued sentences may be used in his descriptions. Pictures may be painted in words if the salesman is of the high-pressure type. This angle of the sales talk is rich in its possibilities. The facts are of almost universal knowledge. The work of the salesman is to take these general facts and make them specific, applicable to the prospect in hand.

When one can show the prospect that what he buys is beneficial to him, that he is being rendered a service whose value is greater than what he pays, then the sale is going to be assured. This idea is not overdrawn, nor absurd. It is the fundamental basis of all business and industry. It should inhere in every transaction. And every salesman convinces his customer that it is true in every sale, else there would be no sale, except where the buyer is already convinced

(Continued on page 28)

# Packard Builds to Serve

*New York Service  
Building Embodies  
Many Time Saving  
and Efficiency  
Promoting  
Features*

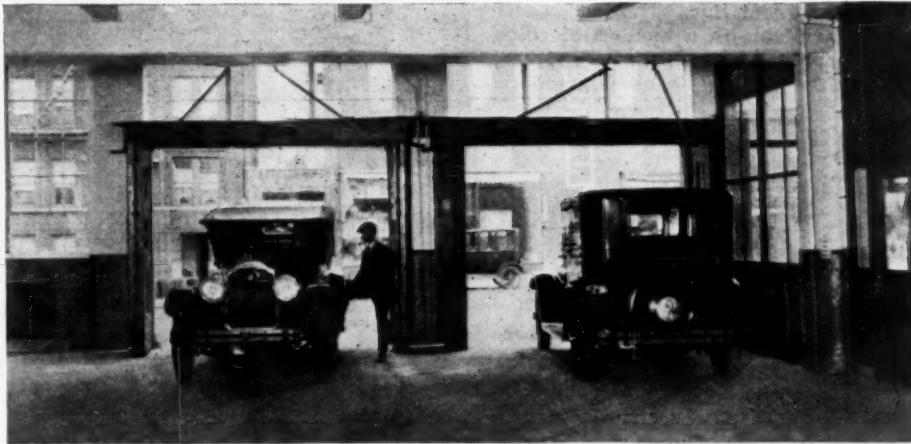
LEE J. EASTMAN, president of the Packard Motor Company of New York, remarked in a recent interview regarding the true meaning of "service" to the motor industry today. "When a man buys a motor car today he wants more than the car itself—he wants service with his car."

Thus he stated the principle upon which the Packard Motor Car Company of New York have based a great plan for the expansion of their service facilities.

The recently completed Packard Service Station at Broadway and Sherman Avenue, near 196th Street, New York City, is a part of this great plan. This new building, combining under one roof the most modern features for the servicing of motor cars, has a floor space of over 135,000 sq. ft. Light is afforded on all sides by a great central court. It is of reinforced concrete and was constructed at a cost of \$750,000.

The personnel of this new plant comprises more than 300 workers, for the most part employed in the service department, a small space being allowed to sales. The fact that both sales and service are housed under one roof facilitates a greater measure of personal service.

In this most modern of service buildings, the annoyance of elevator service has been eliminated by wide ramps. Cars may now be moved simply and easily from floor to floor. The use of the ramp speeds up



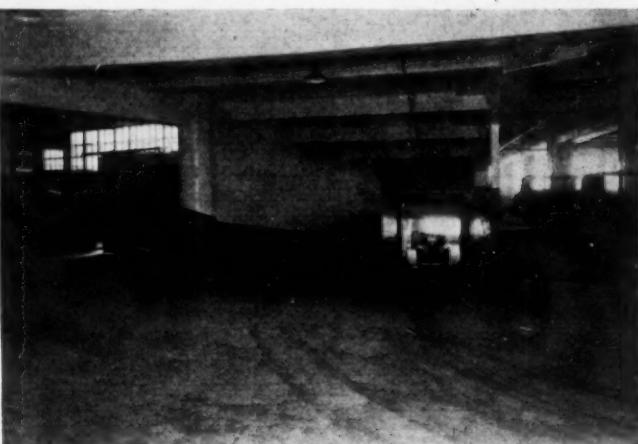
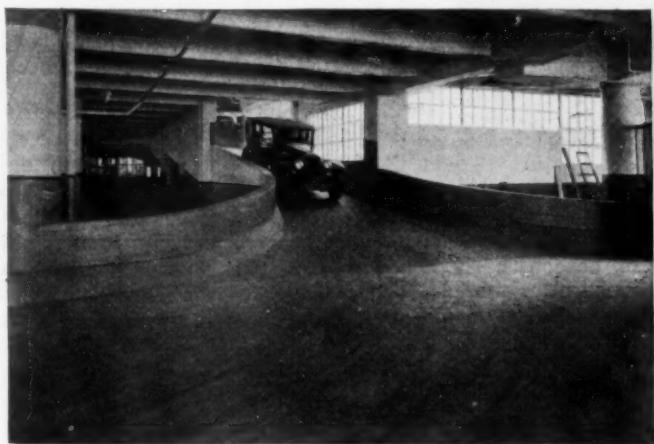
*Wide, electrically-operated folding doors to accommodate cars both coming and going make entrance and exit easy for customers*

the work, and saves the customer's time when he leaves his car to be serviced.

Another feature of this service building is a daylight work shop. Fine boring and machine work can be done with more accuracy in the daylight, and Packard mechanics work here under an all-glass roof.

A pneumatic order tube system has been installed throughout the building as an additional time-saver, and in the shops great electric hoists facilitate the ease with which cars can be serviced. The telephone operator is centrally located on a raised platform so placed that she can see practically the entire service floor. This is of great advantage when men on the floor are called to the telephone.

To the last detail, this building is equipped to give rapid and efficient service. As a service building it closely approaches perfection. It is stations such as this which are public expressions of the attitude which farsighted automobile companies are taking toward service. It indicates the fact that the automobile manufacturer in this country realizes that his future prosperity depends upon the extent to which he can, today, provide his owners with ample service facilities.

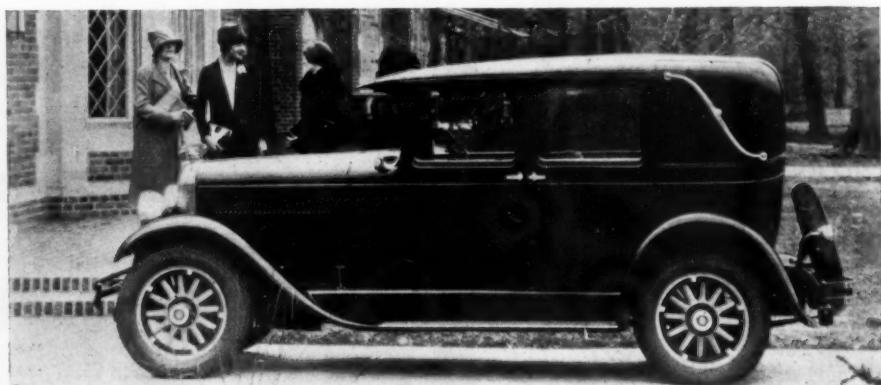


*A complete ramp system saves customers' waiting time and saves their cash as well, speeding up work by avoiding delays*

# New Marmon 8 Brougham

MARMON MOTOR CAR CO. has added a four-door brougham at \$1895 to its eight-cylinder line. The new model will be available in a number of color options with interior fittings and upholstery the same as in other standard closed models. This increases the number of eight-cylinder models to 11, four of which are custom built.

Daily production at the Marmon factories continues to hold above 100 cars daily with an increase contemplated to meet increasing demand from the entire sales organization. The company reports the addition of nearly 300 distributors and dealers since the first of the year.



New Marmon 8 Brougham

## Rolls-Royce Offers New Phantom Model

PRODUCTION of a model of the Rolls-Royce chassis, called the New Phantom, at Rolls-Royce of America's East Springfield works, is announced. This is along the general lines of a car brought out by the English works in Derby last year, but adapts the product to the left drive and other American requirements. More than 75 of the cars now in manufacture at East Springfield are said to be of this new type and advance orders point to in-

creased business for the balance of the year.

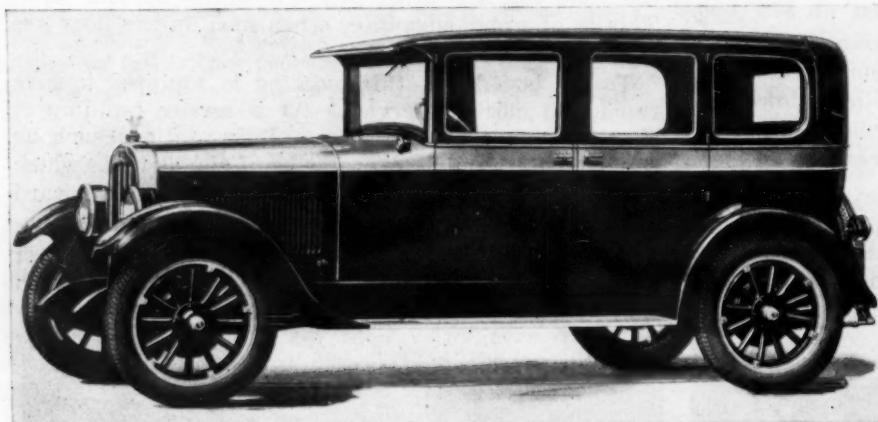
The new product, which sells for \$2,000 more than the cars having the "40-50" chassis model, is said to possess the advantages of one-third more power, with quick acceleration; a six-brake system that gives easier control, greater safety and a quicker stop; a new lubrication system, operated from the driver's seat and making contacts with as many as 35 points in the chassis, and a serrated shackle on the rear spring that makes for increased comfort and

increases the long life of the car. The brake system is controlled by the Servo principle, and the new oiling system is so devised as to give the precise amount of oil required to keep each individual bearing in the proper condition, whether the bearing be tight or loose.

Production of Rolls-Royce bodies is being concentrated at the works of Brewster & Co., at Long Island, N. Y., of which Rolls-Royce took control more than a year ago. Chassis will be made in East Springfield and driven to the Brewster works for the bodies to be mounted. The coach works division in Springfield will be used almost exclusively for remodelling and reconditioning and for the storing of cars for the convenience of owners. This will form one of a chain of maintenance depots throughout the country, under the direction of Bertram W. Ainsworth, assistant vice-president.

Simultaneously with the announcement of the new model chassis came the publication of the annual financial report of Rolls-Royce, showing net earnings of \$737,885 for the year ending Dec. 31, 1926, against \$739,502 in 1925. A deficit \$238,354 at the end of 1925 has been wiped out, the statement says, a dividend of \$1.75 a share paid for the quarter ending Nov. 1, and this rate has since been maintained. A net profit of \$524,635, for 1926, after bond interest and federal taxes, is reported.

## New Chandler Standard Six Sedan



New Chandler Standard Six Sedan

MANY of the latest developments in style and design are built into the new Chandler Standard Six Sedan priced at \$995. The body has low road hugging lines combined with graceful streamlining. A choice of Buckingham Gray or a two-tone Sage Brush Green and Brewster Green is offered.

The interior is upholstered in gray broadcloth. The instrument board and window molding is finished in circassian walnut with the door molding set off by a silver stripe to harmonize with the silver-backed instruments. Comfort of

the passengers has been provided for by ample room in both front and rear compartments and in the rear compartment a robe cord and foot rest are installed.

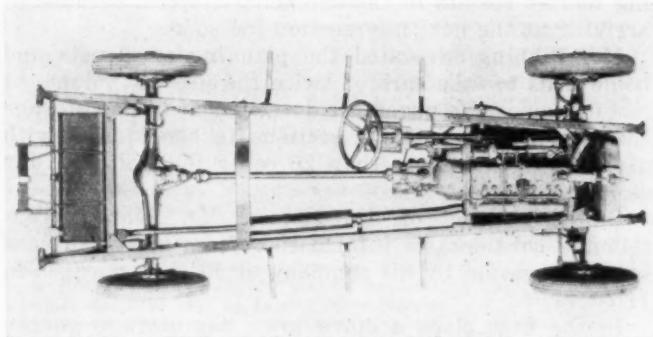
The engine is of 3 in. bore with 4½ in. stroke and is patterned after other Chandler engines. The chassis is lubricated with the Chandler "One Shot" system. The chassis equipment includes 30x5 balloon tires, four wheel brakes of the mechanical external contracting type, air cleaner, oil filter, thermostatic control of the cooling system, and self adjusting spring shackles.

## Big March for White Trucks

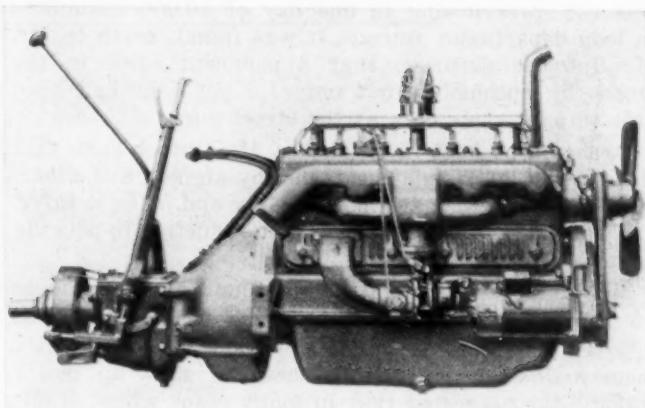
CLEVELAND, April 16.—March deliveries of White trucks and buses were greater than in any month since last September, representing an increase of 74.5 per cent over February. Orders on the light duty trucks, prices of which were recently reduced, were 23 per cent higher than in March of 1926.

Delivery is now being made of 126 White trucks to various municipal departments of New York City bringing the New York White fleet up to 1,072 units.

# Peerless 6-60 Model Now in Production



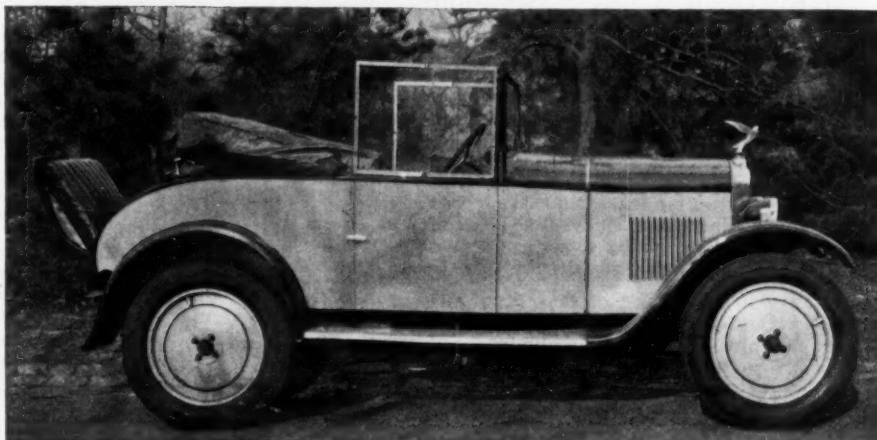
*Plan view of chassis of the new Peerless 6-60*



*The six-cylinder engine of 3 1/4 by 4 in. bore and stroke used in the new Peerless 6-60*



*Four-door sedan in the new Peerless 6-60 line*



*Peugeot Convertible Cabriolet*

## New Organization Plans Sale of Peugeot in U. S.

NEW YORK, April 18.—The first foreign small car to invade the American field on a large scale will be the Peugeot, under plans formulated by the recently organized Peugeot American Corp., which has opened offices and salesrooms at 171 West 57th Street, New York. American capital is back of the project.

The Peugeot company of Paris has developed a new type for the American market. It is being sold here in two models, at \$1085 delivered in New York for the convertible cabriolet, and \$1050 for the convertible touring car. The engine is rated at 7 hp., has four cylinders, 60x90 millimeters, wheelbase is 89½ inches and tread 38 inches. The car develops 50 to 55 miles per hour and does 45 miles to the gallon.

Stressing the sport character of the cars, the company is importing them

unpainted, allowing the purchaser to choose his color combination. A fabric body option is provided on the touring car. American wheels and tires, 27x 4.40, are provided but the remainder of the car is entirely made in France.

Yves De Villers is president of the Peugeot American Corp. as well as American representative for the Peugeot company. Other officers of the corporation are Paul Barringer, acting

vice-president; Paul Jackson, treasurer; John R. Dane, secretary and general manager, and John W. Hessian, sales manager. Mr. Hessian was formerly with the Studebaker and Cadillac agencies in New York.

The Marquis de la Falaise de la Coudraye has taken the California territory and it is expected that other agencies will be started in the east, but the company intends to expand slowly.

## AUTOMOBILE MAKERS AND CITY OFFICIALS DISCUSS TRAFFIC PROBLEMS (Continued from Page 9)

Parking should be permitted where it does not interfere with traffic.

An interesting feature of the Chicago traffic survey was the interviewing in one day of 96,000 customers in loop department stores. It was found, much to Mr. McClintock's surprise, that 8 per cent came to the stores by automobile but only 1.5 per cent had been able to park their cars at the street curb.

It should be kept in mind, Mr. McClintock said, that the purpose of regulating traffic by signals and otherwise is to make it move more readily and make it safer, and to this Mr. McIlraith added the reduction in policing cost.

Mr. McIlraith said that he has found many instances of stop and go signal lights having been installed at intersections where the volume of traffic does not justify them and where they only serve to slow up motor traffic. He suggested that in many cases where traffic is heavy only at morning and evening peaks these lights be allowed to operate as stop and go signals only for limited times and then turned off, leaving only a caution light showing.

It was brought out by Mr. McClintock that in the Chicago survey automatic signal lights were recommended only for intersections where in 16 hours 16,000 or more vehicles pass, of which not less than 25 per cent are using the street of lesser travel.

Where a number of contiguous street intersections are tied up in a signal light system, Mr. McIlraith recommended the progressive type as against the synchronized type. A properly timed progressive system, he said, will permit vehicles to move clear through the system without a stop if they travel at the moderate speed for which the system is set. On the other hand, he said, where the synchronized system is

used the tendency is for cars to speed in the effort to pass as many as possible of the intersections before the light shows stop. In the progressive system speeding merely results in the car being stopped because of arriving at the next intersection too soon.

Mr. Bibbins advocated the planning of streets and boulevards to take care of twice the present volume of motor traffic. He urged the development of day storage facilities in the business sections in small units with a charge of not more than 25 cents for ordinary day storage.

On the subject of day storage Mr. Peabody contributed considerable information from his experience in the operation by his company of 13 such garages in 11 cities.

In the first place a down town day storage garage must be located in the line of travel. This means on high priced ground. His company has overcome this disadvantage to some extent by developing a type of construction that can be put up for not much more than half the cost usually considered the minimum for such buildings.

As a further step towards keeping the storage rate down to as low as 25 cents for day parking, his company has actively developed the merchandising of profitable services and supplies that are the need of all automobiles. The result is, he said, that 53 per cent of the revenues of his garages comes from the sale of merchandise and service and only 47 per cent from storage charges. The special services include lubrication, washing, brake adjusting, painting and the like.

The conference adopted a resolution calling upon municipal and state highway authorities to adopt the standard direction signal shapes and colors recommended by the Hoover conference on street and highway safety.

### Many Dealers Favor Scrapping Old Cars

(Continued from page 13)

From W. P. Staebler, Staebler & Sons, Inc., Ann Arbor, Mich.  
(Reo-Oakland-Pontiac)

**S**HALL we scrap the older used cars? Certainly! Such a procedure is becoming imperative and it is just as much the manufacturer's concern as the dealer's.

To our notion about the only way it can be accomplished is by the manufacturer granting a special allowance to the dealer for trading in cars that are scrapped.

We understand that Chevrolet dealers have been given such a plan and are using it very effectively.

From R. W. Leach, Curtis Automobile Co., Milwaukee, Wis.  
(Reo)

**W**E certainly do favor the idea of systematic scrapping of the old and decrepit vehicles.

This scrapping, however, should be of such a nature that it would not only eliminate the car as a complete vehicle,

but it should also eliminate the parts from the used parts market.

Might it not be possible to handle such a proposition through a corporation composed of dealers aided, if necessary, by some slight subsidy from the factory. This is probably for the factory as well as for the dealer. We certainly will be glad to follow this discussion in the columns of your publication.

From E. M. Wallace, Wallace Motor Co., Washington, D. C.  
(Nash)

**W**ITH reference to the scrapping of used cars, I would say by all means some plan should be worked out whereby old obsolete cars that are unfit for service and the expense of putting them in condition would be too great, should be scrapped and taken off of the market.

Just what kind of plan could be worked out I am not in a position to state, except that the burden should not be put on the dealer.

### Studebaker Announces Two New Coupes

**T**WO new coupe models in the Commander line are announced by the Studebaker Corporation. These coupes are mounted on the regular Big Six chassis and are powered with the Big Six engine. One is a single-seat two-passenger car with the seat wide enough to seat a third passenger. The other coupe has the same wide seat in the driver's compartment and in addi-

tion has under the rear deck a rumble seat that will accommodate two persons.

In the four-passenger coupe the driver's compartment is upholstered in mohair and the rumble seat in leather. On the right side of the body is a side-opening compartment for golf bags or packages.

The two-passenger coupe is upholstered in leather and has a spacious luggage compartment under the rear deck.

On both models the instrument board panel carries engine thermometer,

hydrostatic gasoline gauge, speedometer, ammeter and oil pressure gauge, all neatly grouped under glass and indirectly illuminated to prevent glare in the driver's eyes. Two-beam headlight control is mounted at the center of the steering wheel. The coincidental lock for both steering and ignition is controlled by the same key that unlocks the door, spare tire lock, and rear deck compartment. Front and rear bumpers, automatic windshield cleaner, rear view mirror, oil filter and 4-wheel brakes are standard equipment.

# The READERS CLEARING HOUSE

Questions And  
Answers



On Dealers  
Problems

## Case of Poor Fuel Distribution

We are having trouble on Ford cylinder blocks. The No. 3 exhaust valve seems to get red and warped. Then it pounds into the block. Almost always we find warped valves in No. 3 and No. 4 cylinders and very seldom in No. 1 and No. 2. This has led me to believe that it must be due to faulty circulation of the cooling water. Could the valve tappet clearance have anything to do with it? We set the exhaust to close on top center and intake to open 1/16 in. down from top center. Would partly closing the opening in the cylinder head gasket at the front cause the water to flow back through the rear opening and make the cooling more equal? It will help on other cars where a pump is used, but we have never tried it on a Ford. Does air drawn from the fan keep the front cylinders cooler than the rear ones?—Delp's Garage, 347 Rood Ave., Grand Junction, Colo.

IT is quite likely that the front cylinders run somewhat cooler than the rear ones. There is another factor however, that you have not figured on. Fuel from the carburetor will condense on the walls of the manifold. In clinging to the walls it will go up and tend to give a rich mixture in the front cylinder. Conditions sometimes vary and we would anticipate getting a rich mixture in No. 1 and No. 4 with a lean mixture in No. 2 and No. 3. Possibly you are getting a fairly rich mixture in Nos. 1 and 2 and a fairly lean mixture in 3 and 4. One remedy is the use of a hot spot, another is to use some device which picks the liquid fuel from the manifold walls and puts it back into the center of the air stream. A MOTOR AGE reader at one time suggested cutting the inlet manifold and turning the lower portion 90 deg. so that the opening of the throttle would not tend to send all of the gas toward the front of the engine. You might accomplish some good by restricting the water flow at the front of the engine, but we believe you would do more good by working with the carburetion. We do not believe the valve setting has anything to do with it, for the setting you give is substantially correct. Of course, if valves are set too close so that they tend to hold open this will cause burning. Burning of the valves will also occur if engine is run too cold so that with normal carburetor setting the mixture that gets to the cylinders is too lean. This is due to the fact that a lean mixture burns slowly and has an oxidizing effect.

### TOE IN ON DIAMOND T

What is the correct way to align front wheels on 2½ and 3½ ton Diamond T trucks with 36 by 4 and 36 by 5 solid

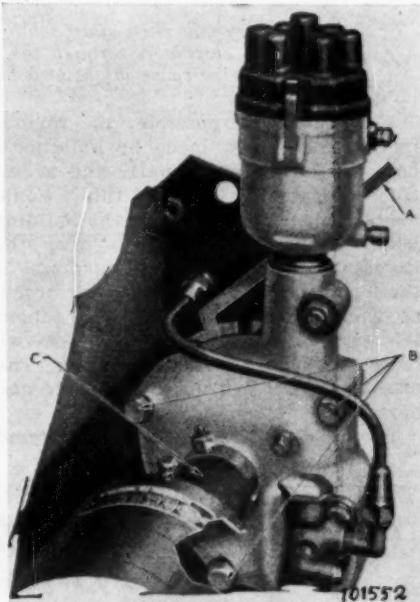
tires? Also explain why the wheels on some trucks seem to be in at the bottom more than others.—L. L. Elliott, 1916 W. 12th St., Little Rock, Ark.

THE tires should toe in  $\frac{1}{4}$  in., that is, the difference is  $\frac{1}{4}$  in. between the measurements taken at the front and rear of the front tires. The camber is different because some trucks had Timken axles and others used Shuler axles.

### CHAIN EASILY ADJUSTED

How is the timing chain on an Essex tightened?—Tennessee Subscriber.

WE are showing an illustration which helps to visualize the method of adjusting the Essex chain. Grasp the rubber coupling on the gen-



Essex chain adjustment

erator drive shaft "C" and turn back and forth as far as possible. There should be approximately  $\frac{1}{8}$  in. movement on the circumference. To adjust the chain loosen the retaining bolts "B." At certain stages of the adjustment the inside top bolt and the bottom bolt, or both, may pass through notches in the plate. It will then be necessary to remove these bolts entirely. In authorized Essex service stations a special tool is used which is inserted in one of the notches so that the flange can be turned toward the mechanic until only the necessary play is present. If the two bolts referred to have been removed and cannot be replaced, then back off the adjustment slightly until they will enter through notch.

## Vibrates More With Light Pistons

We fitted a 1924 Jewett with aluminum alloy pistons and it seems to vibrate more than it did with iron pistons and uses a lot of oil. Advise if the flywheel and crankshaft has to be re-balanced in a job like this when making a change such as we made in the Jewett. We weighed all the piston and rod assemblies before we installed them and they all weighed the same. Also advise what to do to make this engine turn over speed.—Elmer W. Goetz, Olive Cycle & Motor Co., 1043 N. Grand Blvd., St. Louis, Mo.

THE light weight pistons should not increase the vibration. Only on Cadillac and perhaps one other eight cylinder car using a special crankshaft construction is it necessary to have a certain definite weight for the piston and rod assembly in order to balance with the crankshaft weight. It is possible that the piston rings have not yet worn in to give a good contact and even compression in all cylinders. We trust that you checked up on the cylinder walls as it may be that you would not get good results if these are badly worn and were not re-conditioned. If the piston rings have not worn to a good fit in the cylinder walls, it may account for some of the oil consumption. You might also try putting paper under the car and then running the engine at fairly high speed to see if there are any appreciable oil leaks.

Another possible cause of vibration would be uneven firing impulses. This might be caused by a worn interrupter cam or a camshaft in the ignition unit which is rather loose and wobbles around so that the sparks are not timed the same in all cylinders.

It is hard to increase the speed of a stock engine appreciably. Nearly anything you do costs considerable money. It is either necessary to use larger valves or increase the compression or both. If larger valves are used they are not of much value unless a larger carburetor and intake manifold are also used. Depending on the construction of the engine it is sometimes possible to increase compression, by planing off either the cylinder head or cylinder block. Before this is done the construction should be studied to see that there is no interference. When higher compression is used it often means that an engine knock will develop due to the fuel, and special fuel will be needed. However, special fuels are on the market which will stand much higher compression than is ordinarily used today.

# Planning Your New Building

## A Well Arranged Building with Two Showrooms

By Tom Wilder

We are contemplating the erection of a building and we shall appreciate some suggestions as to the arrangement of the different departments for our business. Enclosed you will find a lead pencil sketch showing location of building, etc. The 75 ft. frontage is on the main highway and, of course, our showrooms should be on this street. We have in mind both the new and used car show rooms on this front but your ideas may be different and we shall appreciate any suggestions you offer. The 150 ft. side is on a street that is not traveled to any extent and is only paved back to the railroad behind the building.

The stock of cars which we carry at one time will be about 50. The room for parts and accessories does not take very much space, but would like this to be conveniently located. We also have a small space for doing our own used cars, and want a wash rack on the inside of the building. We will need three small offices, ladies' rest room, etc. The building can be mostly windows along the back to give us plenty of light and air.

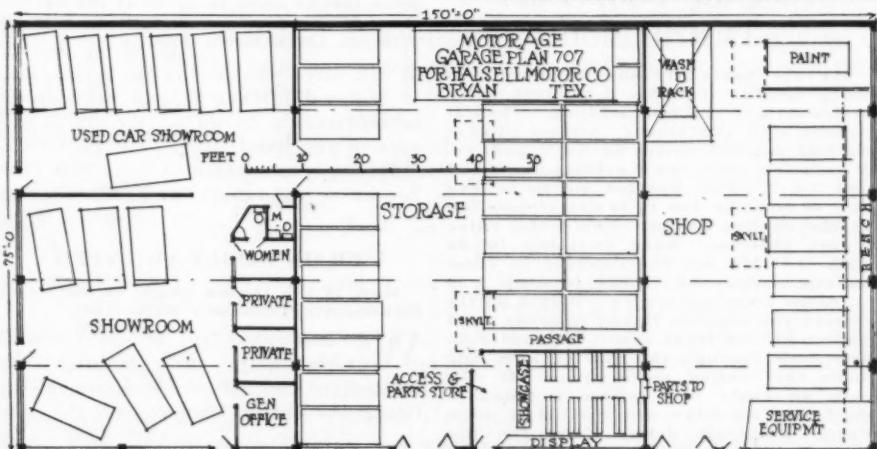
We are not going into anything elaborate in the building and the cost of same will be about \$15,000 or \$20,000. Halsell Motor Co., Twenty-fifth at Washington, Bryan, Tex.

WE have laid out this plan very much according to your sketch. It will however, be impossible to take care of as many as fifty cars unless you count all the cars in your showroom, storage garage and shop. A few more cars could be parked in the aisle in the garage at the extreme end, but this end would only be suitable for new cars or those that were in dead storage and need not be removed.

The only passageway we have left to the showroom for the garage is through the used car showroom, but think this will be all right since the cars in the new car showroom need changing very seldom, while many times cars from the used car showroom must go out for demonstration. There is no car passage from the shop to the garage but we do not think it necessary because if there were considerable space would have to be devoted to it.

The accessory store and parts room have been arranged to open on the side street in order that the parts may be handy to the shop which is a considerable distance from the showroom. There would be a great waste of time if it were in connection with the showroom as is usually the case.

While your broad expanse of window space in the rear wall will give you fairly good lighting in the shop, we would suggest a couple of skylights to illuminate the back corner and the space behind the cars. Skylights will also be advisable in the garage and would help out considerably in the used car showroom as well.



The accessory and parts store, while facing the side street, will make contact with service customers through the display window. A section of the front window space might also be set aside for accessory display.

It would be possible to further increase the floor space by building a balcony for the office, parts and accessory departments, but this would necessitate part at least, of the building being higher in order to give the necessary head room and we doubt if the extra expense would be warranted, as the increase would be only about two cars in the garage and one or two more cars in the showroom. The change would also make the office and parts room less handy.

The building has one advantage and

that is that it is divided in three sections with partitions between, which may be fire walls with openings closed by fire doors; this should materially reduce your insurance premium.

We have extended the trusses carrying the roof longitudinally of the building rather than cross-wise as is usually the case. This makes them considerably shorter and consequently less expensive to construct.

We doubt very much if you can build this structure for \$20,000 but it ought not to exceed \$25,000.

## LEGAL QUESTIONS ANSWERED

By Wellington Gustin

### HOLDING CAR FOR REPAIRS

In Iowa how long can we hold a car in our possession for repair bill without legal papers? Also how long must we hold same before we can dispose of it for repair bill?—Lomleys Garage, Brighton, Ia.

IT is a general rule that one may retain possession of a repaired car until the charges are paid. Where a state grants a lien by statute it is usually now provided that the repair man may release possession of the car and grant credit to the customer and still retain his lien on the repaired car. But in such case this statutory lien is relinquished after a specified time, usually 60 days or 90 days in most states, unless the repair man file his lien claim with the proper official according to the statute.

You do not have to wait to start

action for disposal of a car for collection of repair charges. But you must first make demand for payment in order to give the customer the opportunity of payment. Notices required to be given usually are 10 day periods.

### SELL UNDER STORAGE LIEN

I operate a parking and storage business and would like to know what course to pursue to dispose of a car left in storage with unpaid storage equal to the value of the car. Owner's address is known in another city in this state.—S. S. Curtis, Hammond, Ind.

YOU should proceed to foreclose on your lien for storage. This action can be taken in your own courts regardless of residence of defendant. By proceeding under lien you will preserve any priority or rights given thereunder.

# Answers to Readers' Questions



## Valve Action on Two Cycle Racers

You wrote me recently in regard to the two cycle Duesenberg engine used in the last Indianapolis race. You said before the race some trouble was experienced due to piston rings which were too narrow and caught in the valve ports. Would you be so kind as to explain the term "valve port"? Was it the intake or exhaust port and why?—Jos. Chrobot, 1141 3rd Ave., Milwaukee, Wis.

THE ports are nothing more or less than holes in the side of the cylinder wall. The exhaust ports are on one side of the cylinder and the inlet ports on the other. These ports or openings are uncovered when the piston goes to its lower position. Rotary valves were also used to more accurately time the incoming fuel. When we are accustomed to four stroke cycle engines we sometimes forget that the exhaust stroke and the intake stroke is the same in a two cycle engine. This means that as the piston goes down on the firing stroke we have power developed, then near the end of this stroke the piston in its downward motion opens up the exhaust port and we have a brief period during which the old gas must escape, then the inlet ports are uncovered and the inlet valve opens and the supercharger is depended upon to fill up the combustion chamber. It is therefore evident that some pressure such as the supercharger developed is necessary, as there is no suction available to make the fuel enter the combustion chamber.

You also state there was some difficulty in starting this engine and that it had to be towed in order to get it going. Did it not have a carburetor or was the supercharger supplying fuel first to the carburetor and then to the cylinders?

THE supercharger was between the carburetor and engine and drew the mixture up and forced it into the cylinders. The point previously brought out in regard to the firing, exhaust and intake all being on the down stroke shows why the engine does not start readily. There is also some intake taking place on the first part of the up stroke, the supercharger continuing to force the fuel in until the piston moves far enough to close off the inlet port or until the inlet valve closes. If you have a June 3rd, 1926, issue of MOTOR AGE you will find a description of the various cars which raced at Indianapolis.

### EFFECT OF SEAT ANGLE

Would changing the angle of the valve seat and the valve have any detrimental effect on any poppet valve engine? I have a full set of 45 deg. valve reseat-

ers and 45 deg. valve refacing machine, so would like to know if changing a 30 deg. valve seat and valve to a 45 deg. would affect the performance of the engine.—North Dakota Mechanic.

CHANGING the angle from 30 to 45 deg. will theoretically cut down the valve opening a slight amount. However, the difference is so slight that we do not believe it would be noticeable in the engine performance. A seat width of about  $\frac{1}{2}$  in. for the exhaust and  $\frac{1}{8}$  in. for the inlet would be about right for the 45 deg. angle. The actual reduction in valve opening assuming the same lift is maintained is approximately 18 per cent. This seems like a considerable reduction, but the factors that limit the amount of fuel entering the cylinder are not confined to the valve opening. The size of the carburetor and manifold and the size of the valve ports as well as the valve opening have much to do with the amount of fuel entering the combustion chamber. It would of course be desirable to finish the engine with the same valve seat angle that it used in the first place if possible.

## Try the Light Type Connecting Rods

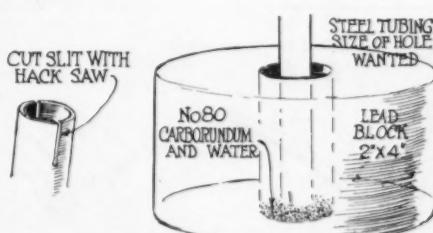
Seventeen months ago I bought a Case touring model V with 9-N Continental engine. This car had run about 33,000 miles. I dismantled it and overhauled every unit. The engine block was reground and fitted with .015 in. oversize Kanti Skore pistons. To reduce oil consumption we altered the slots somewhat and used plain step cut rings in the upper grooves and the Simplex rings in the two lower grooves. We reground the crankshaft and installed new main and connecting rod bearings. Also installed new timing gears. The accessory side of the engine was changed somewhat to permit using a Bosch DU-6 magneto as well as battery ignition. We put on new type hot spot Schebler 1 $\frac{1}{4}$  in. carburetor and installed new valves with oversize stems. When assembling the engine I had to set the valves  $\frac{1}{2}$  tooth late or early on account of the way the gears went on the crank and camshaft. After running 2000 miles could not get more than 45 miles per hour so changed the timing so as to have the valves  $\frac{1}{2}$  tooth early. This gave no better results. What would you suggest?—A. A. Eichler, Rockridge Garage, 5433 College Ave., Oakland, Calif.

THIS 9N Continental engine had cast iron pistons and steel connecting rods. It was also made with aluminum alloy pistons and duralumin connecting rods, and was then known as model 12XD. It would be preferable to use either combination, that is the iron piston and steel rod, or the aluminum alloy piston and duralumin rod. In your case it might be advisable to install the duralumin rod. The local Continental representative in Oakland, California is Colyear Motor Sales, 274 Twelfth St. If you do not find that the engine knocks you might try advancing the spark a slight amount until you get a point where it does knock. This means that you can then retard the spark a slight amount and you will have the most effectual running position. Another possibility is that the clutch is slipping. You can check this by listening carefully when accelerating at fairly high speed to see whether the engine speed increases out of proportion to the car speed. This engine should pull the car up to a speed of 55 or 60 miles per hour.

## SHOP KINKS IDEAS *That have been Found Useful*

### DRILLING THROUGH GLASS

To drill any size hole in glass by the use of a lead block and steel tubing bore out the block as shown and use No. 80 carborundum and water. The lead block is the secret of it all for it holds the grinding compound in its place. A steel pipe is used the same size as hole wanted and it is slotted at one end with a hack saw.—J. L. Horney, 226 Mulberry St., Clinton, Ind.



Readers of MOTOR AGE are invited to submit ideas that they have found useful in doing some particular service job in the shop in a better or quicker way. For each one published \$2.00 will be paid. Whenever possible the idea should be accompanied by a sketch or diagram from which a drawing can be made.

### CHEVROLET TRUCK GEAR RATIOS

Advise the gear ratios between crank-shaft and rear axle at the three separate shifts on a late model Chevrolet one ton truck.—Britton Sales & Service Co., Britton, S. Dak.

THE rear axle gear ratio is 5.43. The transmission ratios are 3.32 in low, 1.77 in second, direct in third and 4.2 in reverse. This makes the total ratio from engine to rear wheel 18.15 in low, 9.6 in second, 5.43 in high and 22.8 in reverse.

# Clearing Up Electrical Troubles

## Roadside Trouble Shooting on Ignition Systems

Show a diagram that will explain the best way to test a condenser when on the road, that is when you are called out to a car that is stuck. Also show how to test the coil and the best way to test the interrupter points. I mean using the battery current and every day tools.—G. A. Martin, Williams & Martin Auto Co., Greensboro, N. C.

THE simplest thing to do is to sit in the driver's seat and watch the ammeter. If the car is one which has an ignition switch that connects the generator to the battery, first disconnect the generator and block the interrupter points open with wood or paper. Then turn on the ignition switch and see what the ammeter indicates. If snapping the ignition switch on and off shows a faint flicker of the ammeter needle it is an indication of a shorted condenser. There should be no deflection of the ammeter needle with the interrupter points held open and there should be a discharge of four or five amperes if the points are touching. Then remove wood or paper from between points and operate the starter so as to crank the engine and see if the ammeter needle vibrates or flickers showing that the points are making and breaking. This is a check on the primary circuit.

Next remove the distributor cap (see Fig. 1) and disconnect the center wire which leads to the coil. Hold this near some metal part of the engine or near

the interrupter housing as indicated in the sketch and make and break the primary circuit by operating the interrupter points with one finger and see what sort of a spark will jump from the high tension wire. If it will jump  $\frac{1}{8}$  in. and has some red color or flame to it, it indicates that the ignition is O. K. up to this point. The next thing to do would be to put the distributor cap back on and connect the coil wire and see if you can get as good a spark at each spark plug when the engine is turned by hand. If not there is a high tension leak from the spark plug wires to ground or possibly the high tension rotor in the distributor is punctured and the spark is jumping through to the shaft.

If the spark is weak at the coil there is no use in testing at the plugs. The next thing to do is to disconnect the wire from coil to switch (see Fig. 2) and connect in a piece of lamp cord as shown. Have the ignition switch turned on and the interrupter points blocked open with a piece of paper or wood. Then put the two wires on your tongue and see if you can taste an acid or salty taste. To check up on what this taste should be, try it with the interrupter points closed. On 6-volts there is no danger or discomfort in this test although on 12-volts it is pretty strong.

If you can get a taste which indicates current flowing when the interrupter points are blocked open it shows that the condenser is shorted. This test holds good regardless of whether the condenser is located in the coil or in the interrupter.

If the condenser is in the interrupter you can connect between the coil and interrupter if you wish instead of between coil and ignition switch. If you have primary current which is made and broken properly and you have a good condenser and you can get no spark from the coil when you make and break the circuit, it is a practical certainty that the secondary winding in the coil is shorted and that a new coil is essential. If the condenser is in the coil and is shorted a new coil is also required as a good condenser outside of the coil will not give ignition when in parallel with a shorted condenser. A coil with a shorted condenser might be made to give temporary operation however, if the primary wires are reversed and a good condenser is connected across the interrupter. This puts the shorted condenser across the battery where it does no harm, at least for a temporary run, as the shorted condenser usually draws one ampere or less.

Bad points are detected by inspection in case they are burnt down so that the layer of tungsten is gone or nearly gone and contact is being made by the iron portion underneath. In some cases it is not possible to detect bad points by inspection. The only thing to do is to check everything else, watch carefully to see if the points flash badly and then try a new set. Bad flashing might also be caused by a condenser which tests O. K. as far as shorts are concerned but which is open or disconnected. Here some experience is necessary to judge of the degree of sparking or flashing and to figure what the cause may be.

### A MATCHLESS IDEA

Sometimes when you are out on the road and have no matches it helps to know how to start a fire by using the engine ignition. Wrap a bit of cotton cloth or waste around the screwdriver and dip it in the gasoline tank. Then remove a wire from a spark plug and run the engine. Make the spark jump about  $\frac{1}{4}$  in. to the engine and hold the saturated waste in the spark. This will ignite the waste and you can then light your fire with this torch.—Jerry Marek, 3012 S. Kenneth Ave., Chicago, Ill.

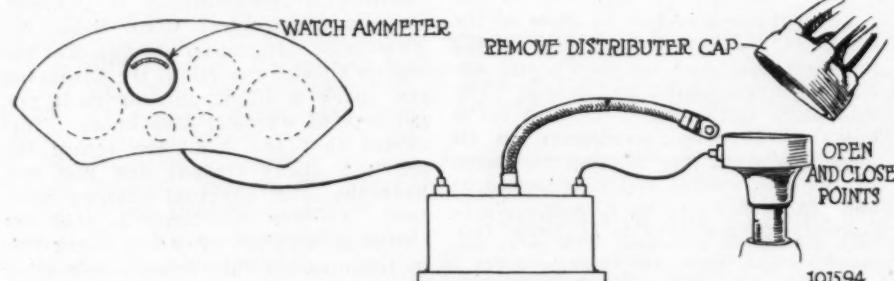


Fig. 1—Working breaker points by hand to test spark

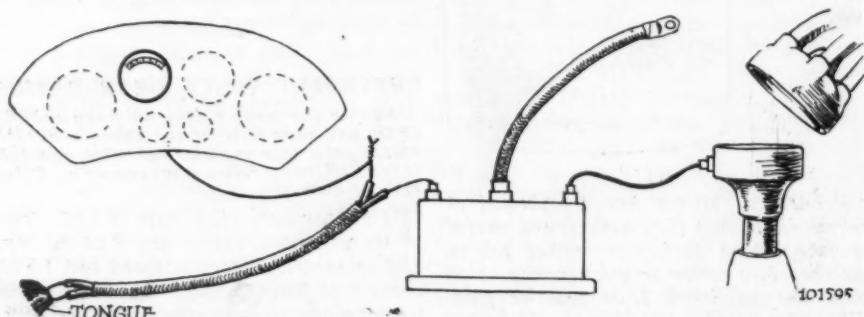


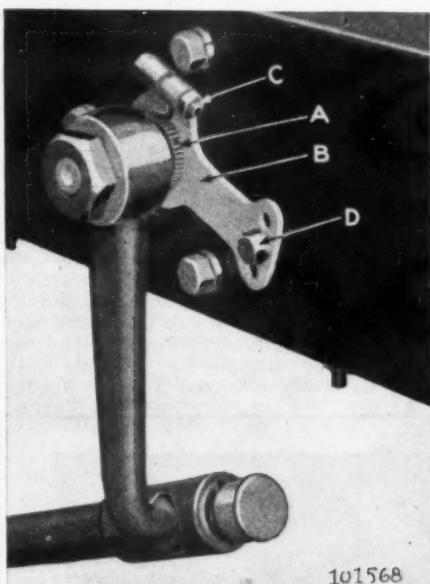
Fig. 2—Making tongue test to check for shorted condenser

# Answers to Readers' Questions



## Hard to Steer on Dirt Roads

We have in our shop a Jewett coach, 1925 model which has been driven 6200 miles. It is getting hard to control on dirt roads. It wanders first to one side and then to the other and you cannot tell which way it is going next. There is no play in the steering gear and we have tried the wheels straight ahead and with  $\frac{1}{4}$  in. toe-in. Tires are 31 in. by 5 $\frac{1}{4}$  in. balloon, with 35 lb. pressure in each. The only possible cause of this trouble that I can see is the fact that



Jewett steering adjustment

The front springs sag a slight amount, the left one a little more than the right. When the car was new these springs were straight but now they bow up slightly between the axle and rear shackle. Have tried using a shim between spring and front axle to tilt the top of the king pin back a little bit more. This did not seem to effect any improvement.—Puzzled Reader.

LOOKING at the front axle from the side of the car the top of the king pin should slant back from  $1\frac{1}{2}$  to 2 deg. This amounts to about  $\frac{1}{8}$  in. in a vertical height of 6 in. Possibly you can place the car on a flat concrete floor and use a carpenter's square and measure to the upper and lower portion of the king pin to see if you have the axle slanting back about the right amount. The toe-in of the tires should be from nothing to  $\frac{1}{8}$  in. You might also check the camber of the front wheels. If a plumb line is placed so that it touches the outer surface of the tire at the top, then the bottom of the plumb bob should be from  $\frac{5}{8}$  to  $\frac{3}{4}$  in. out from the outer surface of the tire at the bottom. One possibility is that you have too much caster or backward slant of the king pin and it

might be well to try the wedges in such a way as to reduce this.

We understand that in this steering gear which is a worm and wheel type that there is one tooth on the wheel which is slightly higher than the other teeth and is intended to mesh in the center of the worm when the front wheels are pointing straight ahead. We are showing an illustration of the steering gear. To check the condition above indicated it is well to remove the Pitman arm and then turn the steering wheel until it is found that at a certain place it turns slightly hard. This shows that you have the point where the high tooth is in the center of the worm. The front wheels should now be pointing straight ahead and the Pitman arm should be put back on.

## TOO MUCH AUTOMATIC ADVANCE

We are troubled with a few Buick cars producing gas knocks under certain conditions. Can you suggest a remedy?—Ivan C. Sharp, 409 N. Peashway St., South Bend, Ind.

WE understand in some cases it is desirable to replace the light governor spring in the ignition unit with a heavy Delco spring No. 33647. This usually constitutes a certain remedy. If there is still a tendency to knock it may be desirable to try an additional cylinder head gasket. The trouble is of course produced primarily by the low grade fuel, which trouble can usually be eliminated by using some anti-knock fuel, thus getting full power from the engine.

## Springs Are Drilled Before Tempering

Is there any way to drill holes through automobile springs? Common drills will not do it.—E. N. Olson, Loyalton, S. Dak.

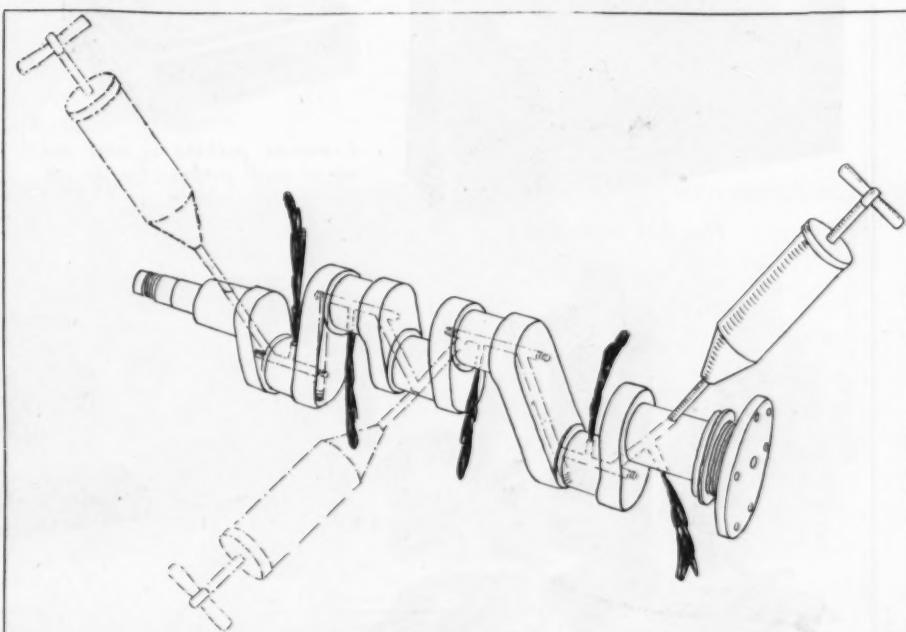
IT is not feasible to try to drill through tempered steel. The only way to do is to take the temper out. In the case of springs this would of course spoil the spring unless the spring could be re-tempered again which is not feasible in the ordinary shop. The center hole which is common to most spring leaves is put in before the spring is tempered.

What put the Argyle single sleeve engines out of the race at Indianapolis?

THE Schmidt special driven by Nemish went out with transmission trouble while the Guyot special driven by Albert Guyot went out with piston trouble.

## CHECKING THE OIL PASSAGES

Here is a suggestion which may be of service to other MOTOR AGE readers. Whenever I overhaul an engine which uses pressure lubrication I take the crankshaft out and put it on the bench and then test it to see that all the passages are clear. I use an oil gun and force oil in at the main bearings to see if it comes out in a good full stream at the connecting rod bearings. Air is not so good for testing for it finds its way past a slight obstruction which would seriously interfere with the flow of oil.—Chicago Mechanic.



Pressure gun used to check oil passages

# NEW ACCESSORY ITEMS of INTEREST

## Startomatic

A NEW device called the Startomatic which automatically causes the starting motor to crank or re-crank the engine has been placed on the market by the Williams Bros. Aircraft Corp., San Francisco, Cal. The action of this device is described as follows by the manufacturer:

"The re-cranking feature of the Startomatic is under the influence of a very feeble current from the generator which releases a small armature allowing a spring to close a circuit to the main switch only when the engine comes to a dead stop. At this point the main switch of the Startomatic comes into action—cranking or re-cranking the engine (which operation requires about 160 amps). At the first impulse from the engine the current load drops to about 75 amps, at which point, by reason of the basic electrical principles incorporated in the Startomatic the starting switch releases and the motor continues to run under its own power, a very feeble current from the generator holding the main starting circuit open.

"If for any reason the engine fails to continue its rotation, the operation of cranking is repeated and continues to repeat until such time as the engine is running on its own power."

The list price is \$9.50 and the suggested installation charge is \$2.50.

## Mototrunk

MOTOTRUNK is the name of a new line of automobile trunks for all cars manufactured by the Motor Trunk Co., Detroit, Mich. These trunks are finished in black enamel or any color of lacquer to match the car. They are made of highgrade steel with piano type hinge and rubber weather strips. They are said to be rumble proof. The locks and finger lifts are heavy nickel plated. A model to fit Essex and Hudson coaches and the Hudson brougham is priced at \$27.50.

## Accessory Package of Conneaut Packing

A NEW accessory package containing enough Conneaut plastic metal packing to pack the largest size automobile engine water pump shaft is being put out by the Conneaut Packing Co., Conneaut, Ohio. This package is intended for the individual car owner who desires to repack his own water pump. For this purpose it can be easily sold by dealers and garages.

## Jefferson Universal Ignition Coil

A NEW coil known as Model U-900 and designed for use with both 12 and 6 volt electrical systems is a product of the Jefferson Electric Mfg. Co., Chicago, Ill. It is said that in combination with four brackets, a condenser and a 12 volt resistance unit this coil may be used on any passenger car, truck, bus or tractor. This coil is said

to produce a heavy flame-like spark which will ignite all the gases and cause perfect combustion in all high speed and high compression engines. The price of the coil alone is \$4. One bracket may be had for 25 cents extra and the coil with a complete set of brackets and condenser is priced at \$5.50.

## Schwarze Magnetic Vibrator Horn

THE Schwarze No. 40 magnetic vibrator horn is a product of the Schwarze Electric Co., Adrian, Mich. Although operating on the magnetic principle, this horn is provided with a very simple and permanent tone adjustment which can be made without the use of special tools. It is built of heavy materials and comes in a high lustered black enamel finish. Brackets are available for use on any car and it may be had in either 6 or 12 volt type. The list price is \$4 except on the West Coast and far south, where it is \$5.

## Lorenz Portable Tool Compartments

A NEW feature of the Lorenz Tukaway and Big Chief trunks manufactured by the Lorenz Trunk Works of Minneapolis, Minn., is a portable tool compartment for which there is no extra charge. Perpendicular slides which fit in along the walls of the small portion of one end of the trunk carry the tools which ordinarily are found in the tool box of the automobile. These slides can be easily removed and replaced.



*Schwarze magnetic vibrator horn*



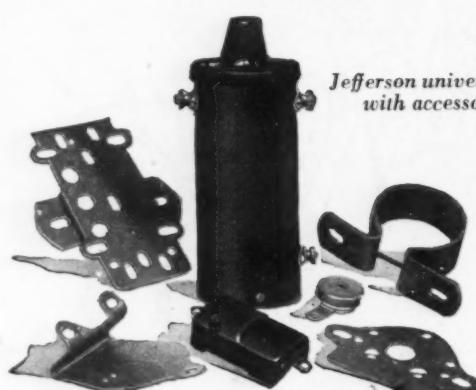
*The new Mototrunk*



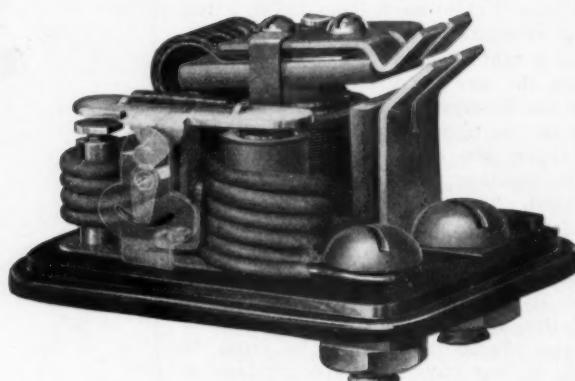
*Conneaut packing is now put up in small package for the car owner*



*Lorenz portable tool compartment*



*Jefferson universal coil with accessories*

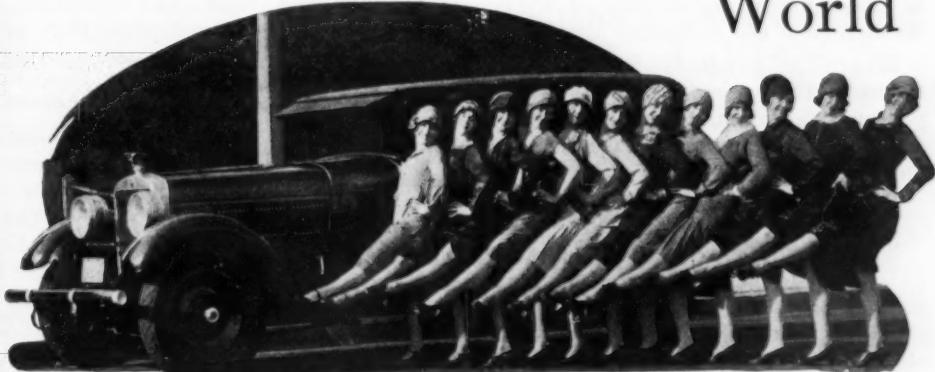


*Williams Startomatic*

# All Around the Automobile World



**203 MILES AN HOUR** in his famous Sunbeam speed machine has not prevented Major H. O. D. Segrave from enjoying the luxury of a Marmon Series 75 which he chose for his personal use while in New York City.



**THE EIGHT-IN-LINE VS. THE TWELVE-IN-LINE.** The Gardner eight-in-line 90 sedan is here arrayed against the Pavley-Oukrainsky Ballet of the Chicago Civic Opera Co. Page Mr. Paris and his golden apple this is too hard for us. Personally we would rather own the Gardner as we would know what to do with it, but the girls are surely a beautiful dozen with plenty of refinement and pep



**THE GOLD RUSH AT WEEPAH** is unique in that automobiles are the mode of transportation used instead of burros as in former times. This is Bob Weston, one of the old timers, with his Dodge Brothers car No. 1,500,000 trying a pan of dirt

**OLD ALEX OFF DUTY.** With his dogs and gun, Grover Cleveland Alexander, reputed winner of the 1926 World's Series for St. Louis, is shown sitting on the running board of his Big Six Studebaker ready to go out after ducks



**THE BANFF DOG DERBY** over the 85 mile trail from Calgary to Banff is one of the sporting events of the Northwest. The dogs are shown here getting ready for the start in front of the Imperial Motors, Ltd., Chrysler dealers in Calgary. Automobile dealers do well to officiate in sporting affairs of this sort

# THE SALESMAN MUST GUARD HIS WORDS

(Continued from page 16)

of the value of the service of the goods he buys and in such case the salesman simply takes the order.

Where the purchaser is convinced of this service to be had in the goods he buys without the aid of the personal salesman, as through advertising or salesmanship in any manner, the personal salesman becomes a mere order taker.

## *Painting a Rose-Hued Picture*

The sales talk when confined to this designated field of service to be had from the article sold may be as rosy as the seller cares to picture; for the reason that it enters into the field of speculation and opinion, clearly distinguishable and understood by both parties.

To set out as a fact what an automobile can do may amount to false representation and fraud if the fact is untrue. But to show a man how an automobile can be used in his business and how it can save his time, his efforts and his money is opinion and speculation. He may be shown how it will save family expense for amusements; how for example the family may be given pleasure in God's Out O' Doors, where nature paints the scenes more gorgeous than the best scenic artist at the Grand Opera where the air is foul, and deadly germs may abound. And who could set a value upon the advantages shown? It is pure speculation. Let oily tongued painters, not in oil but words, confine their canvasses to the field of opinion and speculation.

For when he crosses the border into fact to induce a sale he may mislead his prospect by false representation. The courts recognize "puffing" of one's product as being legitimate. One's thoughts and enthusiasms on his product are commendable in the salesman. He may transmit his enthusiasm to his prospect, or he may win by his pleasing manner and personality, and turning a prospect into a customer may require a lot of puffing. But his thoughts and opinions should be kept clear from his statements of the facts. They are too easily intermingled so that a customer honestly and fairly sold may, if disappointed from his own misconceptions, turn upon the salesman and his product, caus-

ing legal difficulties. In such circumstances he invariably insists that opinions or recommendations were stated purely as fact by the salesman.

## *Guard Statements of Fact*

Since automobiles have reached such a high state of perfection by manufacturers, questioning by buyers of the performance of delivered cars is perhaps rarely encountered. In the case of the second-hand or used cars the sale must be guarded lest the question of false representation enter in. For false representation may be made by a salesman who asserts as a fact that which he does not know. For instance, a salesman may think a car is of a certain year's manufacture, but he must know before he makes a positive statement to that effect.

Now we may lay down the general rule of what constitutes fraud in sales, or rather define the term as recognized in the courts generally. Fraud is a false representation of material fact made to induce a sale, upon which the buyer acts and acts to his damage. False representation must be as to a material element of the transaction, inducing the action. False representation alone is but a lie, and is not actionable. The definition of fraud appears simple enough, but its ramifications in the many transactions of business appear to be interminable and nowhere is it encountered so often as in the law of sales. Each element of the definition may be expanded and illustrated by adjudicated cases into volumes.

No salesman need ever resort to fraud to secure his sale, nor even skirt the margin of false representation. Modern ideas of merchandising recognize only truth in both advertising and salesmanship. And the masters at the helm directing big business, or little, are building for permanency and they assuredly do not need the "slick" salesman who "puts it over" on his prospect and does not sell him value and service nor do they desire salesmen who misrepresent their product. Instead they want salesmen who know their goods, and whose intelligence will aid them in discovering the value of the product to the prospect, and who will present same in a convincing manner.

## The Light Car in England

(Continued from page 15)

that is suitable for private as well as light commercial work. The engine has a very flat horsepower curve which enables the car to travel over ordinary undulating country very nearly as fast up hill as down. The standard model costs \$625.

## *The Constantinesco Transmission*

In the Constantinesco car an automatic type of transmission is used which eliminates all clutches and gears, this being known as the Constantinesco torque converter. This car uses an engine with a two cylinder two stroke construction having a capacity of less than 30.5 cu. in. The top speed of the car is less than 40 miles per hour, but it can average 28 m.p.h. over ordinary road, with two passengers. The two stroke or two cycle principle is used so that the pistons of the engine may balance the moving parts of the torque converter mechanism.

The running costs of a typical light car costing approximately \$1,000 are substantially as follows:

Interest .....	\$50.00
Depreciation .....	375.00
Insurance .....	60.00
Tax .....	60.00
Repairs .....	30.00
Gasoline (30 miles per gal.) .....	412.50
Oil .....	12.50
Tires .....	50.00
 Total .....	 \$750.00

The figures given should be ample and are based on a yearly mileage of 10,000 so that in spite of the high tax the cost per mile works out at 7½ cents. As first class railroad travel in Great Britain is 6 cents a mile it shows that a car of this sort would prove an economy if two or more passengers are carried.

In conclusion, Mr. Fenn pointed out that the market for the light car was continually broadening as prices declined and new sources of demand are opened up. At the same time there is a powerful demand for a car that is a little more roomy and luxurious. Some manufacturers show signs of developing 6 cylinder models to meet the requirements of those who want something a bit above the cheapest type of automotive vehicle.

# MAKERS PREPARE for PEAK DEMAND

## Some Plants at Capacity To Meet Needs of Field

### April's Output Excluding Ford May Pass Same Month Last Year

NEW YORK, April 18.—Production in motor vehicle and parts plants continues to go forward at satisfactory levels as the industry goes into the last half of April. A few companies are pushing their manufacturing facilities to the limit in an effort to meet the peak spring demand, but a good many factories are supplying requirements without pushing their facilities to capacity. Generally speaking, however, the second and third weeks in April have recorded another definite upward trend in production and sales.

All producers, parts makers in particular, are concentrating attention on the possibility of reducing manufacturing costs still further, while there has been a slight downward revision in wage scales in many Detroit plants made possible largely, it is believed, by the surplus labor resulting from the low rate of Ford production in recent months. There is no tendency on the parts of manufacturers to try to get major production economies out of reduced wage scales and earnings for individual workers are expected to remain at a relatively high level in many cases.

April production for the whole industry, exclusive of Ford, will compare favorably with that of last year and may even exceed the 1927 total for that month. Some manufacturers who have been unable to get into production on new models announced some months back are straining every effort to get cars into dealers' hands in time to take advantage of the peak buying demand of the next few weeks.

Truck sales are continuing at a high level and this branch of the industry seems likely to run ahead of its 1927 totals for the second quarter as it did in the first three months of this year.

### Erskine Clears Up Rumors

SOUTH BEND, Ind., April 16.—In order to dispel rumors of price reductions which President A. R. Erskine, of the Studebaker Corp. says are not contemplated, Mr. Erskine has given out a statement to clear up the mystery attaching to his previous assertion that the Corporation would have an important announcement to make April 17. The announcement Mr. Erskine had in mind relates to the performance of a Studebaker stock car at Culver City, Cal., April 1-5 under A. A. A. supervision. An article elsewhere in this issue tells of that feat.

### Explains Windsor Plan

MINNEAPOLIS, April 18.—One hundred dealers attended a meeting in the Nicollet hotel to hear Floyd Allen of the General Motors Corp. explain the Windsor plan for handling used cars. The meeting was under auspices of the Minneapolis division of the Minnesota Motor Trades Association. E. F. Pomeroy was chairman. He said the plan had been in use two years in Windsor, Ont., and basically it is a method by which used car prices may be reached equitably and stabilized, with information from time to time issued to the public as to conditions. Mr. Allen at noon addressed the General Motors Club at the Hotel Radisson, of which Roy Pearce, of the finance division, is president.

### Will Manage Overland Branch

MILWAUKEE, April 16.—Bert F. Anger, head of Anger, Inc., and prominent in the Milwaukee automotive trade for 22 years, has been appointed manager of the Milwaukee factory branch of Willys-Overland, Inc., filling the vacancy caused by the death on March 24, of Thomas C. McMillan. Mr. Anger was a Ford dealer from 1917 to 1922, and from 1923 to 1926 headed the Anger-Chevrolet Co., Milwaukee county distributor. On Dec. 1, 1926, he disposed of his Chevrolet interests to become Milwaukee county distributor of the Willys-Knight and Overland. The new appointment as factory manager for the Wisconsin and Upper Michigan territory will mean no change in his present Milwaukee county retail franchise.

### Elliott Signs for May 30 Race

INDIANAPOLIS, April 16.—Frank Elliott, well known speedway driver, has entered for the annual 500-mile grind here May 30. His mount will be the front-drive Junior Eight Special. Driving a Miller Special Elliott finished sixth in the Indianapolis race last year. His entry again this year follows those of Harry Hartz and Dave Lewis, two more front-wheelers, and a car nominated by Jack LeCain.

## Indiana's Sales Running Far Ahead of 1926 Pace

### Big Jump in March Gives First Quarter of 1927 30 Per Cent Rise

INDIANAPOLIS, April 16.—Indicating a strong pick-up in business for automobile retailers in the state new car sales in March for Indiana, as revealed in registrations compiled by the Indianapolis Automobile Trade Association, showed a gain of 57 per cent over February of this year and a gain of 27 per cent over March of 1926. The number of new car registrations in March was 10,389 against 6593 and 8136 for the preceding February and January respectively.

The big acceleration in March made the first quarter of this year 30 per cent ahead of the corresponding quarter of 1926.

Practically all makes scored sharp gains in March. Ford gained over February but failed to equal January's sales, while other light cars, Chevrolet in particular, cut in deeply on Ford's proportion of the total.

### Discuss Olds Sales Policies

PORLTAND, Ore., April 16.—Oldsmobile dealers of Oregon and southern Washington, 150 in number, gathered here and discussed sales policies for the ensuing year, particularly in relation to the Pacific northwest. Officials of the Olds Motor Works headed by D. S. Eddins, vice-president and general manager, were guests of the local distributors headed by E. E. Cohen.

This section of the country is developing into an automobile field of increasing importance and the purpose of the gathering was to outline plans for factory cooperation with distributors and dealers.

Mr. Eddins was accompanied by R. M. Hatfield, manager of the factory service division, and P. C. De Barry of the factory sales promotion division.

## Price Changes in the Prices and Weights Tables for MOTOR AGE April 21st Issue

Make	Model	Body Style	Old Price	New Price
Lincoln	8	Sport Roadster	\$4700	\$4600
Lincoln	8	Sport Touring	4700	4600
Lincoln	8	Sport Phaeton	4700	4600
Lincoln	8	Coupe	4800	4400
Lincoln	8	4-p Sedan	5000	4800
Lincoln	8	5-p Sedan	5100	4800
Lincoln	8	7-p Sedan	5300	5000
Lincoln	8	Limousine	5500	5200
Stearns Knight	F-6-85	Cab Roadster	3550	3450
Willys-Knight	70-A	Cab Coupe	1395	1495

## Chrysler Named Member of N.A.C.C. Directorate

Say Records of Association Indicate 1927 Will Be One of Best Years

NEW YORK, April 16.—The board of directors of the National Automobile Chamber of Commerce has elected Walter P. Chrysler to membership in this body. He fills the vacancy caused by the resignation of Charles Clifton, who has become an honorary director as well as honorary president after 23 years of service.

Mr. Chrysler is a member of the association's Motor Fuel Committee and a member of the Traffic Committee. For many years he has been active in the organization's affairs. It is believed by the N. A. C. C. that his activity on the board will be of great assistance to the association in carrying out its policy for mass salesmanship of the value of automotive transportation.

A gain of 25 per cent in output during March over February by companies represented at the board meeting was indicated in their reports. It was stated that records at hand promise that 1927 will be one of the best years for the automobile business. Figures for comparative companies indicate a 5 per cent gain for the first quarter of 1927 over the same period of 1926.

### Buy Wire Wheel Business

NEW YORK, April 16.—The Wire Wheel Corp. of America has purchased the wire wheel business of the American Car & Foundry Co. Under the plan of acquisition a considerable part of the plant equipment now in Detroit will be moved to Buffalo. Current output of wire wheels will be increased 20 to 25 per cent by the purchase H. G. Jackson, president of the Wire Wheel corporation estimates.

### Redman Joins Bosch

SPRINGFIELD, Mass., April 16.—James E. Redman has been added to the executive staff of the American Bosch Magneto Corp. as assistant to the president. In announcing the appointment A. T. Murray, president, says the action is in line with the corporation's policy to develop sales volume through recognized jobbing channels. Mr. Redman has been connected with the Biflex Corp. for the last seven years.

### Brumbaugh Goes with White

CLEVELAND, April 16.—A. K. Brumbaugh has resigned as electrical engineer of the Autocar Co. to join the White Co. and will assume his duties April 18, reporting to the department headed by the commercial engineer of White Motor Co.

Mr. Brumbaugh will have charge of the division which has to do with estab-



Walter P. Chrysler, elected to membership on Board of N. A. C. C.

lishment and maintenance of White standards of quality and performance both at the Cleveland factory and in direct branches. His activities cover light delivery express and heavy duty truck chassis as well as three bus chassis, also specialized truck chassis, which are built for large utility companies, municipalities, road contractors, etc.

### Business Conditions

Department of Commerce Gives View of Current Situation

Measured by check payments, the dollar volume of business during the week ended April 9 was greater than in either the preceding week or the corresponding week a year earlier, according to the weekly statement of the Department of Commerce. Wholesale prices averaged higher than in the previous week but were still substantially below last year. Loans and discounts of Federal reserve member banks expanded and were larger than in the corresponding period of 1927. The Federal reserve ratio was higher than in either the preceding week or the same week of the previous year.

Interest rates on time money averaged lower than during the previous week or the corresponding week of the previous year. Prices for stocks averaged higher, both as compared with the preceding week and the same week of 1926; bond prices showed similar comparisons with both prior periods. Interest rates on call loans, though showing no change from the preceding week, averaged higher than in the same week of 1926. Business failures, although less numerous than in the preceding week, were larger than during the same week of the preceding year.

Distribution of goods, as seen from data on carloadings, continued to register gains over the previous year.

## Bus Men Invited Into Membership of A.E.R.A.

Organization's Action Is Reversal of Position of Rail Interests

NEW YORK, April 16.—Truck and bus manufacturers were astonished to learn that the executive committee of the American Electric Railway Association, at a recent meeting here, voted to throw the association open to membership by independent bus owners and operators.

Apparently marking a reversal of the position hitherto taken by the railway interests, the action served to add to the growing list of organizations purporting to represent bus operators. The decks are apparently being cleared for a membership struggle that will have important consequences for the industry when federal legislation is again considered by Congress.

In making bus companies not directly affiliated with electric railways eligible for membership in the A. E. R. A. the executive committee declared its object to be that of making the "association representative of all constructive factors in the development of transportation." On the point of membership qualifications, the resolution says:

"One of the essentials to membership shall be that, in the opinion of the executive committee, the applicant shall be fully serving or able in fact and holding itself in readiness fully to serve the transportation needs of the territory in which the applicant is operating, and/or shall be conducting its operations in line with the policies of co-ordinated transportation which the association indorses."

### Approve C.C.C. Finance Rates

NEW YORK, April 16.—Willys-Overland and Hupp Motor Car Corp. have approved the rate schedules of the Commercial Credit Co. of Baltimore, and affiliated companies, for financing retail sales of the cars manufactured by the two factories, according to Commercial Credit officials.

The arrangements are understood to be non-exclusive and it is the motor car companies' viewpoints that the Commercial Credit rates and plans are fair to dealers and purchasers. The new plan of the finance company is featured by a substantial reserve for dealer-losses on repossessions.

### Order for 500 Paige Cars

DETROIT, April 16.—The largest single order of the year for Paige cars has just been placed with the factory by the Paige-Detroit Co., of New York, distributors for Greater New York. The order provides for immediate shipment of 500 automobiles including 64 of the new Paige Eights. The list value of the order is \$753,740.

## Detroit Association Admits Used Car Dealers Joseph A. Schulte Elected President



*Elected by Detroit dealer body: Upper left—H. K. Chambers, secretary; lower left—B. R. Dodds, director; center—Joseph A. Schulte, president; upper right—James Dickson, Jr., vice-president; lower right—Don T. Hastings, treasurer*

DETROIT, April 16.—The Detroit Automobile Dealers' Association has amended the organization's by-laws to wipe out the distinction which hitherto has existed between active and associate members. The change makes all members active and permits all members to vote and hold office.

The association also has amended its by-laws to admit to membership reliable used car dealers rather than restricting membership to new car dealers as in the past.

### Plan Stock Car Race May 7

ATLANTIC CITY, April 18.—Included in the season's program of the Atlantic City Motor Speedway will be a 75-mile stock car race May 7. The Contest Board of the American Automobile Association working in cooperation with the Atlantic City Speedway officers has drafted rules to govern the contest. All entrants must be strictly stock models selected at random from the stock of the competing manufacturer. Entrance blanks and detailed rules may be obtained from the Speedway. Virtually all of the popular priced cars will be in the race. The piston displacement limit will be 300 cubic inches.

If there is favorable public response a 250 to 500 mile stock car race will be staged on the local speedway at a later date.

### New G.M. Executives' Stock Plan

NEW YORK, April 16.—Stockholders of General Motors Corp. have been notified of the corporation's intention to purchase \$35,000,000 of its common stock before the end of 1930, the stock to be sold to executives under the Managers' Securities Co. plan. The present plan expires in four years and the corporation proposes then to make an

Joseph A. Schulte, manager of the Detroit branch of the Cadillac Motor Car Company, was elected president of the association for the coming year. Others elected are: Vice-president, James Dickson, Jr., manager of the Detroit Buick branch; treasurer, Don T. Hastings, of Hastings & Harfst, Inc., Hupmobile distributors; secretary, H. K. Chambers. In addition to electing the foregoing to membership on the board the association also elected to that body B. R. Dodds of Hall-Dodds Co.

arrangement similar to the one now in effect with some of its younger executives.

The stock will be purchased gradually and it is the intention of the corporation to submit the entire plan to stockholders for approval.

### New Erskine Color Options

SOUTH BEND, Ind., April 18.—The Erskine Six sedan is now being offered in two new color options, Manola gray and LeBaron dark gray. The visor is being covered with leather fabric and the radiator is being rounded and beaded.

### New Post for Murphy

LANSING, Mich., April 16.—Appointment of F. Quinn Murphy as manager of the Oldsmobile Lansing Zone is announced by D. S. Eddins, vice-president and general sales manager of Olds Motor Works. Mr. Murphy has been associated with the Olds Motor Works for the past five years, starting in 1922 as factory representative in the Lansing Zone and later as assistant to the zone manager. He is well known to the trade, especially in Michigan where he has been engaged in intensive retail development for Oldsmobile.

## Board's O.K. Will Give Lockhart World Record

### Miller Driver Hits Speed of 164 M.P.H. in a 94.5 Racing Job

WASHINGTON, D. C., April 16.—A new world speed record of 164.009 m.p.h. for a 91½ cubic inch racing car probably will be credited to Frank Lockhart by the Contest Board of the American Automobile Association when affidavits relating to Lockhart's spectacular feat over the Dry Lake course at Muroc, Cal., April 11 have been passed on officially. In a bulletin issued by the Contest Board it is stated that the affidavits have not yet reached the A. A. A. national headquarters here but the Board expressed belief that the record would be confirmed.

While the world's speed record for the mile was set at 203.79 miles an hour by Major H. O. D. Segrave with his 1000 hp. Sunbeam at Daytona Beach, Fla., March 29, the Board calls attention to the fact that Segrave's engine was 30 times the size of that used by Lockhart at Muroc, Cal. Lockhart, who sprung into fame by winning last year's 500 mile race at Indianapolis, drove a Miller, his time in one direction being at the rate of 171.021 m.p.h. Against the wind his miles per hour average was 157.549, the average for both ways being 164.009 m.p.h., which time surpasses any thing done in this country or in Europe with an engine of such small piston displacement.

### Postpone Rickenbacker Sale

DETROIT, April 16.—Sale of the Rickenbacker Motor Car Co. plant has been postponed to Thursday morning, April 21, because bids submitted at the sale conducted this week by William Sayres, Jr., standing master in chancery, were not high enough to satisfy the court.

Charles A. Lavine, of New York City, submitted a bid of \$1,050,000 for the entire plant, which included real estate, equipment, parts, etc. The total value of the plant, equipment, etc., as determined by an audit conducted for the receivers, shows that the value of the property offered for sale totals \$5,526,275.36.

There were several bidders for the plant equipment, parts, etc., with Samuel Levy, New York liquidator, offering the highest bid, \$495,000.

### Mostly U. S. Makes at Fair

NEW YORK, April 18.—Ninety percent of all exhibits at the Leipzig fair this year were American cars. The exhibit clearly demonstrated the fact that American automobiles are well established throughout Germany and more than hold their own in competition with foreign makes, says the local office of the fair.

## Says New England Sales Are Coming Back Strong

### Henshaw Sees Fine Prospect for Offset of Slumps in Earlier Months

DETROIT, April 16.—C. S. Henshaw, Dodge Brothers dealer for Boston and one of the best known automobile merchandisers in the country, while here visiting the Dodge Brothers factory told the Chilton Class Journal Co. that in his opinion the automobile business is coming back strong in the New England territory and that sales for the year should equal those of 1926.

"While sales were off in our territory 25 per cent in January and February, they are coming back so strong it would not be surprising to see the figures for the present month more than offset the showing of the first two months," he declared. Business in New England is recovering to the extent that automobile sales should equal those of a year ago, he declared. Mr. Henshaw's own organization broke all its previous records for passenger and commercial car sales in 1926, and Mr. Henshaw is optimistic over his personal outlook in 1927.

Asked if the used car plans which are being discussed in different parts of the country, especially the Windsor plan, are receiving much attention from dealers in his territory, Mr. Henshaw replied that the used car situation is not, or never has been one that can be solved by so-called plans. "It is a business problem pure and simple and the dealer who handles it as such has no great problem to worry about."

### To Discuss Advertising

DETROIT, April 16.—Many topics of interest to the automotive industry, covering the advertising problems of the day, will be taken up at the Detroit meeting of the Association of National Advertisers which will be held in Hotel Statler, May 9, 10 and 11. Of the 300 national advertisers who are expected to attend, many will be representative of the automotive industry, the committee states. Gordon Kingsbury has been named general chairman and Verne Burnett, secretary of the advertising committee, General Motors Corporation, is chairman of the program committee.

### Truck Export Record

WASHINGTON, April 18.—Shipments of American motor trucks to foreign markets in February established a new high record, with 10,120 units, or a gain of 72.2 per cent over February, 1926, it was announced here by the U. S. Department of Commerce. Passenger car exportations decreased.

The total February production of trucks in this country amounted to only

## Special Motor Vehicle Taxes Increasing at Greater Rate Than Registrations

WASHINGTON, April 16.—Special taxes on motor vehicles in the United States are increasing at a greater rate than the increase in registrations, it was announced here by the American Automobile Association.

Research by the association shows that during 1926 while the registration of motor vehicles in the 48 states and the District of Columbia increased 10 per cent, special taxes, exclusive of the personal property tax, collected from motor vehicle owners mounted 16 per cent.

38,029, the exports registering 26.6 per cent of the output. The value of the truck exports was \$32,265,148, an increase of 7.2 per cent over February, 1926, when the value was \$30,103,506.

Production of passenger cars in February totaled 260,330, as compared with 319,763 in February of last year. Passenger car exports numbered 21,355 in February this year and 22,355 in February, 1926.

### Auburn Averages 68.37 M.P.H. for 1,000 Miles

CULVER CITY, Cal., April 16.—Auburn Automobile Company claims an A. A. stock car record for 1,000 miles as the result of the performance of an Auburn 8-88 over the Culver City Speedway March 18. The Auburn was driven by Wade Morton at an average speed of 68.37 m.p.h. The test run was made under auspices of the American Automobile Association and timed by representatives of this organization.

The best previous record for a stock car under A. A. supervision over the 1,000-mile route is said to have been at the rate of 59.54 m.p.h.

For the first 300 miles Morton's time averaged 71.85 m.p.h., a sandstorm compelling lowered speed. The run was made in connection with the Los Angeles Times stock car trophy contest and was witnessed by 200 members of the trade.

### Larger Chandler Deliveries

CLEVELAND, April 16.—March deliveries of Chandler cars showed an increase of 68 per cent over February according to Sid Black, general sales manager of the Chandler-Cleveland Motors Corp. Although shipments for the first quarter were considerably ahead of the first quarter of last year, Mr. Black says that the Chandler organization has now more unfilled orders on hand than at any period of the company's history. Canadian March shipments were 235 per cent ahead of February.

The average per vehicle tax levy for the entire country was \$21.60 in 1926, as compared with \$20 in 1925, an increase of 8 per cent. The per vehicle tax has increased 153 per cent since 1919, when it was \$8.55.

Special taxes collected from car owners by the states reached a new high peak last year, with a total of \$475,885,583, as compared with \$408,877,708 in 1925, an increase of \$67,007,875.

The state revenues from the gasoline tax increased 27 per cent in 1926, from \$148,258,087, in 1925, to \$187,603,231.

### Store Trade 1.5 Per Cent Off

WASHINGTON, April 16.—Retail sales in department stores in the United States during March of this year showed a decline of 1.5 per cent compared with sales in the same 621 department stores in March, 1926, according to retail sales figures just announced by the Federal Reserve Board here.

Sales were smaller in seven Federal reserve districts, the largest decreases being in the Minneapolis, St. Louis, Richmond and Philadelphia districts. In the Chicago district there was an increase of about 4 per cent and small increases were also shown in the Boston, New York and Dallas districts. Of the total number of stores reporting, 241 showed larger sales than last year and 380 reported declines, the general average being a decline of 1.5 per cent.

### Record March G. M. Car Sales

DETROIT, April 18.—Sales of General Motors cars to users established a new high record in March with 146,275 cars, compared with 141,651 in May, 1926, the previous record month.

General Motors sales to dealers in March also established a new high record, being 161,910 cars compared with the previous record, 138,360 in September last year.

### 238 Auto Body Co. Creditors

DETROIT, April 16.—The defunct Auto Body Co., of Lansing, has 238 creditors, according to the list of secured and unsecured creditors which has been sent to stockholders. The company's total debt aggregates \$722,796.85 and secured creditors have claims amounting to \$359,156.51. Recently the Central Trust Co., of Lansing, receivers, tried to interest 50 of the larger stockholders to rehabilitate the company, but, when this move was unsuccessful it was decided to ask the court to set a sale date.

Larger stockholders in the company have expressed the opinion that enough can be realized from the sale of the property to satisfy, or at least to nearly satisfy all the claims of creditors.

## Board of Three S.A.E. Experts to Supervise Stock Car Contest for Stevens Trophy

INDIANAPOLIS, April 16.—Stutz Motor Car Co. of America, Inc., will be the first to compete for the new Stevens Trophy, which is offered to any manufacturer successful in a 24-hour stock car test on the Indianapolis Speedway. Announcement of the Stutz entry was published in the April 14th issue of MOTOR AGE. The requirements of the test call for the completion of a 24-hour run at an average of 60 miles an hour or better in a regular production closed car.

It is provided that each test be held under the direct supervision of a board of three engineers, members of the Society of Automotive Engineers, to be selected by the Indianapolis Motor Speedway. The cars must be of stock chassis of which at least 1000 have been built, and equipped with standard closed body of which at least 10 have been sold at a regular established price.

The fuels used in the test will be standard gasoline purchased by the technical board. An auxiliary system of gas supply will be permitted, as will any gear ratio and either exhaust cut-out used or muffler disconnected, as deviations from strict standard equipment requirements.

The donor of the trophy is Samuel B. Stevens, who is remembered in the industry for his activity in the early racing days. His Mercedes 60, and later a Mercedes 90, was entered in the early speed trials at Ormond Beach and in the Vanderbilt Cup contests of 1904 and 1905. His Darracq won the Vanderbilt race of 1906. Besides being a member of the S. A. E. he is a former member of the contest board of the American Automobile Association.

The purpose of the trophy, he said, is to give manufacturers an opportunity for going on record with authenticated

performance "in what I consider to be a real worthwhile test of their stock output. Flash speeds as against sustained speeds mean very little. It is the latter quality that really counts, as it means the superlative degree of merit



**Samuel B. Stevens**  
*Donor of Challenge trophy bearing his name, for contest of stock closed cars on Indianapolis Speedway*

in automobile design and construction."

Stutz will start three cars in the test on April 21, F. E. Moskovics has announced, a standard sedan with a regular composite body, a car equipped with a Weymann closed body, and a Black Hawk type of touring car, the latter acting as a pacemaker. The test will give Stutz an opportunity to compare the performance of the regular composite body with the Weymann body.

where he remained until joining the Oakland organization.

### Spring Buying Under Way

DETROIT, April 18.—The trend of spring buying is well under way, sales figures just released by the Olds Motor Works reveal. The company divided retail sales in March into three 10-day periods and the second period sales exceeded the first period by 45 per cent, while the third period exceeded the second period by 16 per cent.

Oldsmobile deliveries to consumers during the first quarter of 1927 showed substantial gains over the same period of the two previous years, and, D. S. Eddins, vice-president and general sales manager, who is now on the Pacific Coast, has wired the factory to speed up shipments to California, especially of roadsters and coupes, which are much in demand in the Golden State.

## Oklahoma City "Set" for Big Merchandising Rally

### Dealers from All Parts of the State Are Invited to Bring Employees

OKLAHOMA CITY, Okla., April 18.—Seven Oklahoma City jobbers, members of the Automotive Equipment Association, will be hosts here April 22 to 1500 automotive dealers, service managers, service station operators, mechanics and others engaged in the retail automotive trade. The automotive dinner will be held in the Shrine temple banquet room, one of the largest banquet halls in Oklahoma City.

The principal speaker of the meeting will be George A. Brusch, southwestern representative of the Automobile Equipment Association.

The J. B. Burwell Supply Co., Sharp Auto Supply Co., Southern Motor Supply Co., Oklahoma City Hardware Co., Severin Tire and Supply Co., Richards and Conover Supply Co., Wolff-Eagen Motor Supply Co. are in charge of the affair.

Privilege has been extended to the dealers over the entire state to bring all of their employees.

C. M. Greenman, president of the Southwestern Automotive Jobbers Association, will preside with Ed Overholser, president-manager of the Oklahoma City Chamber of Commerce giving the address of welcome.

### Six "First Car Owners"

BOSTON, Mass., April 16.—An interesting contribution to automotive history has been made by James T. Sullivan of the Boston Globe in the compilation of a list of the first men to register automobiles in six New England states. According to the information gathered and published by Mr. Sullivan, the following men received the first automobile licenses issued, being No. 1, in their respective states:

Richmond H. Ingersoll, Maine, 1905, Rambler (now Nash).

Gov. John McLane, New Hampshire, 1905, Franklin.

Charles C. Warren, Vermont, 1907, Packard.

Frederic Tudor, Massachusetts, 1903, Winton.

Dr. Rowland R. Robinson, Rhode Island, 1903, Cadillac.

Judge James T. Woodruff, Connecticut, 1903, Oldsmobile.

### Chrysler Dealers Gather

KANSAS CITY, April 18.—A meeting of Chrysler distributors and dealers in this territory was held here. Stewart Munroe, of Detroit, director of sales in the Western division of the United States, attended and conferred with the dealers. About twenty-five dealers were in attendance.

## Riotous Crowd Damages Cars at Miramas Track

### Race Course Is Given Rush Upon Appearance of Mediocre Drivers

PARIS, April 4—(By Mail)—Aggravated by the poor management and annoyed at the withdrawal of some of the best cars and drivers, the crowd rushed the Miramas track, near Marseilles, last Sunday, stopping the race and damaging the cars.

The event was the opening meet of this track, and the program comprised qualifying races under displacement rules, followed by a final for the Grand Prix de Provence and the Hartford Cup. Owing to rain the start had to be postponed until the afternoon, and instead of real racing the drivers were merely required to qualify at 50 miles an hour. During this time the managers responsible for the fastest cars, the 9½ inch Talbots and Delage debated whether they should allow their cars to run.

While Benoist, the Delage driver, was covering a lap to warm up his engine, some official lined up the cars for the final race. With his course barred, Benoist was unable to avoid a collision with Arthur Duray's Amilcar. Benoist was slightly injured and his car rendered unfit for racing. Talbot took advantage of this to withdraw the full team when the start was given, without any explanation being offered the public, and only second rate drivers were present. This infuriated the crowd to such an extent that it rushed the track, stopped the race, damaged the cars, and stoned the Talbot garage.

#### Long Heads Own Company

KANSAS CITY, Mo., April 16.—The Whippet-Knight Motor Company, a new city sales organization for six and four-cylinder Willys-Knight and Whippet motor cars, was opened here at 4609 Troost Avenue.

The new dealer company is headed by Estel Long, who has been associated with the Clester Motor Company, formerly Ford agents and more recently Chevrolet dealers, during the last five years in the capacity of salesman and manager of the used car department.

Harold Pendleton, formerly connected with the Clester Motor Company, is associated with Mr. Long in the new Whippet-Knight Motor Company.

#### New Car Sales in Spurt

SPOKANE, Wash., April 16.—New car sales as reflected in Spokane county registrations for March took a decided spurt, the total being 571 compared with 344 for the two months preceding. The increase is due solely to weather conditions and is considered decidedly good as it was not until toward the end of

#### HOW MUCH CAPITAL?

HAVE you too much capital invested in your business? Or is your capital investment too small? If you are contemplating establishing a new dealership do you know how much capital you should have?

The question of how much capital is very clearly answered in an article that has been written for MOTOR AGE by an experienced authority and which will be published in the annual Sales and Service Reference Number, May 5, 1927.

March that road conditions generally became favorable to motoring in the rural district.

#### Studebaker Driven 5,000 Miles at 61.12 M.P.H.

CULVER CITY, Cal., April 16.—The Contest Board of the American Automobile Association has announced results of a run completed here April 5 by a Studebaker Commander, according to information given out by the Studebaker Corporation. The tests were made for speed and endurance by an American-made stock car, fully equipped. Drivers used were Harry Hartz, Eddie Hearn, Louis Wilson and Ab Jenkins, all well known on race courses.

The Commander is said to have covered 5,000 miles in 4,909 minutes, maintaining an average speed of 61.12 miles per hour which is claimed as a record for this kind of performance. The total elapsed time included time for re-fueling, relief of drivers and other such exigencies. One punctured tire, replacement of a grease cup and two chassis lubrication cups damaged during quick greasing operations constituted the only repairs made on the entire run. During the 5,000 mile trip Studebaker claims to have set up other records for intermediate distances.

#### More Foreign Assemblies

WASHINGTON, April 16.—Material increases in the output of 22 foreign branch assembly plants of American automobile companies during February were reported here by the U. S. Department of Commerce. The reports show sales of 13,392 foreign-assembled cars in February, as compared with 12,373 in January. The output in February, 1926, however, was 16,772.

Of the February sales 6071 were open passenger cars and 990 were closed cars, as compared with 5982 and 755 respectively in January. Argentina furnished by far the greatest foreign assembly market, with England and Brazil second and third.

## Tire Plants Report Big Gains in First Quarter

### Goodyear Productions and Sales for Three Months Set a New High

AKRON, O., April 16.—Official reports of leading rubber manufacturers have confirmed previous estimates of a record-breaking tire business during the first quarter of 1927.

President P. W. Litchfield, of the Goodyear Tire & Rubber Co., announces that sales and production during the first three months were the greatest in the history of the company. The three plants in Akron, Canada and California produced 4,030,656 casings. Sales totaled 4,101,457, representing an inventory reduction of more than 70,000.

March production was 1,500,000 casings and 1,700,000 tubes.

Officials of the Miller Rubber Co. have reported a 100 per cent gain in sales for the first quarter over the corresponding period a year ago.

President J. M. Alderfer, of the India Tire & Rubber Co., states that his company experienced a 150 per cent increase in sales in the first quarter over the same period last year.

While it is doubtful that April tire production will equal that of March, there has been only a slight let down in factory operations.

A substantial increase in sales to distributors and dealers was noted by the rubber companies during the first two weeks in April. Shipments of tires to car manufacturers for original equipment are reported heavy.

#### Ternstedt Appointments

DETROIT, April 16.—Thomas P. Archer, president and general manager of the Ternstedt Mfg. Co., announces the following appointments: W. C. Dandeno, formerly manager of the cost department becomes assistant treasurer and J. H. McPhail is named sales manager. P. E. Stone, formerly with the Eberhard Mfg. Co., the Pullman Co. and for ten years in charge of construction and design with C. Stone & Sons, Chicago, has been appointed sales engineer.

#### Riegel Heads Division

SPOKANE, Wash., April 16.—Dee R. Riegel of the firm of Riegel Brothers, Dodge Brothers and Graham distributors, has been named president of the dealers division of the eastern division of the Washington Automotive Trade Association to succeed Walter Evans. M. O. Anderson, manager of Eldridge Buick company, succeeds L. G. Bellinger as vice-president. The dealers division is the organization that puts on the automobile show in Spokane.

## Compulsory Insurance Battle on in Michigan

Public Hearing Promises to Draw Large Delegation of Bill's Opponents

DETROIT, April 16.—Michigan automotive men are aligning their forces to oppose a compulsory insurance bill which has just been introduced before the Michigan legislature.

The bill is similar in many respects to proposed acts which have been presented to the legislature of many states during the winter, and, Michigan automobile men are of the opinion that, should it be adopted, it would work a great hardship on the industry besides proving a great inconvenience to automobile owners. Indications are that when the bill comes up for a public hearing that one of the largest delegations ever to appear at Lansing will be on hand to voice disapproval.

Introduction of the compulsory insurance bill is regarded as the most important legislation to come up this year, as far as the automobile business is concerned, and now overshadows the efforts of up-state legislators to increase Michigan's present two-cent gasoline tax so that extra revenues could be provided for the individual counties.

### Seek Wider Foreign Market

SYRACUSE, N. Y., April 16.—Enlargement of the merchandising activities of the Franklin Automobile Company in foreign fields is contemplated in a plan in which E. G. Willems becomes export counsel for the foreign sales division. Mr. Willems has started on a year's tour of the world in connection with his new duties. He has had more than 18 years' experience as export sales manager for large automobile companies and is an accomplished linguist.

Mr. Willems will spend most of his time in the field while the home office management of this department will be in the hands of L. B. Benham, as export manager. Mr. Benham formerly was assistant sales manager of the Franklin Company and has been with the organization for several years.

### American Rolls Royce Earnings

NEW YORK, April 18.—Net income in 1926 of Rolls-Royce of America, Ltd., totaled \$524,635 after expenses, depreciation, interest and federal taxes, equal to \$14.98 a share on the 35,000 shares of preferred stock outstanding. In 1921 the net was \$519,169. or \$14.54 a share, on the preferred, on which no dividends had been paid from August, 1921, to August, 1926. The balance sheet December 31, 1926, shows current assets of \$3,402,758 and current liabilities \$863,261. Profit and loss surplus was \$225,031, compared with a profit and

Placed in Charge of Olds New York Branch



F. A. Spencer

Oldsmobile has appointed F. A. Spencer manager of its New York branch. Mr. Spencer has had more than 11 years automotive experience, serving eight years in executive positions in the General Motors organization of which Oldsmobile is a division. In the more recent past he was sales manager in Boston for Chevrolet, holding this position until his present appointment. In his new position Mr. Spencer will have charge of Oldsmobile sales in the eastern half of New York state, all of Long Island, part of New Jersey and a greater portion of Connecticut.

loss deficit of \$238,354 on December 31, 1925.

### Battery Men Seek Betterments

CHICAGO, April 16.—At a recent meeting of battery manufacturers in Chicago with representatives of the National Better Business Bureau a number of recommendations were adopted for the purpose of improving trade conditions in the battery industry.

The recommendations adopted are as follows:

1. Make sure that every battery is appropriately and correctly rated.
2. Brand each battery with the correct rating figure, or with maker's name and type or symbol number from which the rating may be determined. Preferably this branding should be on the box itself, at least on the name plate or other exposed part.
3. In each catalog or piece of advertising matter, advise dealers of the rating method employed and what any type or symbol numbers used may mean.
4. Decline to misbrand batteries made for others, or to deliver batteries in over-size boxes unless marked with correct capacity rating in plain figures.

## 100-a-Day to Be Falcon Output Rate by May 1st

Domestic Market Now Is 70 Per Cent Covered by Direct Dealerships

DETROIT, April 16.—The Falcon Motors Corporation has stepped up production from 50 cars a day to 70 cars a day, according to President John A. Nichols, Jr., who also declares that by May 1 the company's plant at Elyria, O., will be producing 100 automobiles a day.

Introduction of the new Falcon Knight in various cities throughout the country has been attended by large crowds, according to reports reaching the executive offices here, and the reception the new car has received has proven most gratifying to the Falcon executives.

Mr. Nichols stated that the domestic market is now 70 per cent covered by direct dealer connections, and, that in many points the direct dealers have already appointed many associate dealers.

The company announces the appointment of the following direct dealers: Central Iowa Motor Co., Des Moines; Hemphill Motor Co., Kansas City; Eichelberger-Reed Co., Pittsburgh; Harry Gratton, Peoria; W. Woodman, Portland, Me.; Martin & Crawford, Worcester, and the Spokane Auto Co., Spokane, Wash.

### Big Cadillac Shipments

DETROIT, April 16.—According to President Lawrence P. Fisher of the Cadillac Motor Car Company, Cadillac's sales to dealers in March established a new one month's record. March shipments of Cadillac and LaSalle cars exceeded by 29 per cent March, 1926, which was best previous month. The increase, he said, was partly due to introduction of the LaSalle and partly to increased Cadillac sales throughout the country. Mr. Fisher predicts April business will exceed March.

### Truck Sales Rival 1926

DETROIT, April 18.—Retail deliveries of Graham Brothers trucks and commercial cars to customers by Dodge Brothers dealers now are averaging more than 230 a day.

This volume of sales practically equals the high average of 1926, when all previous records of the company were broken with a total of 87,293 commercial car and truck deliveries.

### AC Window Trim Contest

FLINT, Mich., April 16.—The AC Spark Plug Co. has announced a window trimming contest for dealers which will be open from April 1 to June 30 and in which 100 prizes will be awarded.

## A.E.A. Message Heard by 25,000 in Three Months

Announce Thirty-two More Meetings Following 200 Since First of Year

CHICAGO, April 15.—Beginning with meetings at Cheyenne, Wyo., and Hastings, Neb., today the Merchandising department of the Automotive Equipment Association announces 32 more gatherings for dealers to be held in as many different localities.

Since the first of the year, according to Arthur R. Mogge, merchandising director of the association, the A. E. A. has sponsored 200 dealer meetings at which better merchandising methods have been discussed. Total attendance at these meetings in the past three months is estimated at 25,000 which is taken to indicate an intense response on the part of the trade. Mr. Mogge says an effort will be made to hold meetings in all principal cities throughout the country. Following is the list of newly scheduled meetings released by Mr. Mogge's department:

April 15, Cheyenne and Hastings, Wyo.; April 18, Sterling, Wyo., Abilene, Texas and Topeka, Kans.; April 19, Wichita Falls, Texas and Lawrence, Kans.; April 20, Scott's Bluff, Neb., and Junction City, Neb.; April 21, Emporia, Kans., and Torrington, Wyo.; April 22, Oklahoma City, Chadron, Neb., and Huntington, W. Va.; April 24, Casper, Wyo.; April 25, Sheridan, Wyo.; April 26, Powell, Wyo.; April 27, Worland, Wyo., and Fort Worth, Texas; April 28, Riverton, Wyo.; April 29, Lander, Wyo., and Tulsa, Okla.; May 2, Ironwood, Mich.; May 3, Houghton, Mich., and Corpus Christie, Texas; May 4, Houston, Texas, and Marquette, Mich., May 5, Beaumont, Texas; May 6, Canton, O.; May 12, Shawnee, Okla.; May 18, Ft. Smith, Ark.; May 27, San Antonio, Texas.

### More Meetings for Ohio

COLUMBUS, O., April 16.—A. C. Faeh, secretary of the Ohio Council of the National Automobile Dealers' Association is arranging for a motor tour of Ohio when about 75 meetings will be held with local dealers to discuss problems from the dealers' standpoint. He will be assisted by Frank X. Schaut, attorney for the Cleveland Manufacturers' and Dealers' Association, who will speak on the legal side of every automobile sale, warning the dealers the pitfalls to be avoided.

### Officers Re-elected

PITTSBURGH, Pa., April 16.—At the annual meeting of the Pittsburgh Automobile Dealers' Association all the officers and the entire board of directors were re-elected for next year. The officers are as follows: President, B. W. Lemmon; first vice-president,

## Street Is Used as Exhibition Hall When Uvalde Dealers Hold Show

UVADLE, Texas, April 16.—An automobile show in a small town can be made a huge success. That was demonstrated when the Uvalde dealers staged their first annual automobile show recently.

The Uvalde dealers have no show house, but the city furnished the space by setting aside two blocks in the business section where they could display their wares.

So the first automobile show here was staged in the center of the business district, with the business houses, the paved streets and the trees and flowers which grow in profusion, things the motorist will see every day he drives his car, as the background.

The dealers advertised their show extensively and the show was well patronized. A total of 73 cars were on

display. The dealers reported more than 100 sales as a result of the show and the people of the county are talking about the event yet. The show will be an annual feature, the dealers said. They will use the public streets to display their wares, because they found that the most appealing way.

The dealers awarded prizes for the oldest car driven to Uvalde the day of the show. A 1902 machine won the prize. Other prizes were awarded for the most comical looking car driven to the city, for the youngest married couple at the show, for the couple coming the greatest distance.

Trucks played a good part in the show. The Uvalde fire fighters staged a contest with the fighters of another city. That night the local firemen gave a street dance.

### Good Show at Wichita Falls

WICHITA FALLS, Texas, April 16.—The automobile dealers of Wichita Falls, with the jobbers and manufacturers cooperating, recently held their annual spring automobile show. Practically every dealer in the city had cars on exhibition the four days the show continued. More than 70 of the newest styles in automobiles were on exhibition.

The dealers declared the exhibition stimulated interest in the new cars and as a result a good number of sales were made on the floor of the show building. The crowds came from North and West Texas and the Southern Section of Oklahoma. It was the first time all the new models offered this year had been seen in one building in North Texas.

### Portsmouth Dealers Elect

PORTSMOUTH, O., April 16.—At a recent meeting of the recently organized Portsmouth Automobile Dealers' Association permanent officers were elected as follows: President, Harry F. Howe; vice-president, S. A. Stewart; secretary-treasurer, Lee Watkins. The organization has a large initial membership and was organized under the direction of A. C. Faeh, secretary of the Ohio Council of the National Automobile Dealers' Association. John Taylor, a well known Portsmouth dealer, was selected as temporary chairman of the organization.

### Open Third Sales Branch

ROCKFORD, Ill., April 16.—The Rockford Buick company has opened its third sales and service station in this city at 1417 Broadway with H. A. Beckman manager. The new branch has a 56-foot frontage with a building 156 feet deep. It maintains tire and stock room with garage space occupying nearly half the building.

## Want Revision of Laws On Dealer License Plates

### Cincinnati Tradesmen Get Together with Vehicles Commissioner

CINCINNATI, April 18.—Legislation looking to more flexible laws regulating the use of dealer license plates and demonstration tags will be drafted for presentation in the Ohio legislature as the result of a meeting of the Cincinnati Automobile Dealers' Association at the Cincinnati Club, at which Chalmers R. Wilson, Commissioner of Motor Vehicles interpreted the present law. The address of Mr. Wilson was the result of a vigorous campaign inaugurated by the State Motor Vehicle Department a short time ago, since which time several persons using dealer tags for other than demonstration purposes have been arrested and fined.

The campaign is known definitely to have worked a hardship on two or three dealers. In one instance a salesman, having completed a demonstration and en route to his headquarters, stopped at a supply store to purchase a small part wanted at the service station and he was arrested and forced to pay a fine by one of the field agents from the State Bureau.

Commissioner Wilson, in referring to this particular instance, declared the action was ridiculous.

Following several questions from various dealers and an urgent appeal for some method permitting a more liberal interpretation of the present law, pending legislative action, which plan was heartily concurred in by the Commissioner, he announced that he immediately would instruct his field agents in this territory to confer with Harry Gardner, secretary-manager of the dealers' association with regard to local enforcement. He expressed full confidence in the integrity of members of the Cincinnati association and declared they would be relieved of annoyance in the future by this method, the field agents being instructed to be guided to a great extent by Mr. Gardner's advice and suggestions before taking any action.

#### Citroen Director in U. S.

NEW YORK, April 16.—Felix A. Schwab, managing director of the Citroen company, is head of a large delegation of Citroen executives and engineers who are now visiting the automobile manufacturing centers. Mr. Schwab is in Detroit with Benjamin King, head of the London branch of the company. Seventeen engineers, headed by Henri Guillon, are already here and five more are on the way.

Although there have been rumors linking the visit of this group to the

## Coming Motor Events

### Automobile Shows

Green Bay, Wis. Aug. 29-Sept. 2  
Auto Building

### Conventions

American Automobile Association,  
Annual Meeting, Ritz-Carlton  
Hotel, Philadelphia June 16-17

Associated Automotive Engine Re-  
builders, Hotel Winton, Cleve-  
land May 26-28

Automotive Equipment Association,  
Summer Convention, Multnomah  
Hotel, Portland, Ore. June 27-July 2

National Association of Automobile  
Show and Association Managers,  
Drake Hotel, Chicago July 26-27

National Automobile Chamber of  
Commerce, Annual Meeting, New  
York June 2

North Carolina Automotive Trade  
Association, Morehead Villa,  
Morehead City, N. C. August 15-16

S. A. E.  
French Lick Spring, Ind., May 25-28—  
Summer Meeting.

### Races

#### A. A. A.

Altoona, Pa.	June 11
Altoona, Pa.	Sept. 5
Atlantic City	May 7
Atlantic City	Sept. 24
Charlotte, N. C.	July 11
Detroit	Sept. 10
Indianapolis	May 20
Los Angeles	Nov. 27
Salem, N. H.	June 25
Salem, N. H.	Oct. 12
Syracuse, N. Y.	Sept. 3

### COMING FEATURE ISSUES OF CHILTON CLASS JOURNAL PUBLICATIONS

May 1—Automobile Trade Journal—Annual Big Small Town Market Number  
May 5—Motor Age—Annual Sales and Service Reference Number  
June 4—Automotive Industries—Engineering Number  
June 10—Motor World Wholesale—A. E. A. Summer Meeting Number

United States with the plans of some American manufacturers, all such reports have been denied, and it is said that the Citroen managers are mainly concerned with studying American production and distribution methods and may purchase some machinery.

#### Consider Reopening Plant

OTTAWA, Ont., April 16.—Gordon M. Lefebvre, general manager of General Motors Corp. of Canada, Limited, Oshawa, Ontario, has announced that his company is prepared to proceed with the reopening of the automobile engine plant at Walkerville, Ont., if the Canadian Government will make a ruling on the interpretation of certain regulations enacted one year ago relative to the importation of automobiles and parts into Canada from the United States. These have to do with the Canadian tariff on parts for automobiles made or assembled in the Dominion, the rebate or drawback in the duty on parts for Canadian cars exported to other countries and the percentage of Canadian products and manufacture required to qualify an automobile as made in Canada.

The General Motors unit at Walkerville would employ 2000 men if reopened, Mr. Lefebvre declared, and the production would be largely Chevrolet engines which were formerly made there but which are now shipped from the United States.

### Licenses 16 Per Cent Ahead

COLUMBUS, O., April 16.—A total of 65,609 passenger cars and 8759 motor trucks and commercial vehicles were licensed in Franklin county up to April 1, according to a report of County Auditor Thatcher. This is about 16 per cent ahead of the records of 1926. Total receipts for the tags were \$518,407, which is divided between the state, county and municipalities in the county for road maintenance.

### To Handle Cadillac-La Salle

SPOKANE, Wash., April 16.—The Thompson-Cadillac company has been incorporated to handle the Cadillac-La Salle line in eastern Washington. Kirk Thompson, formerly of Seattle, is head of the new distributorship. Associated with him are G. W. Byers and Sophia B. McCommas of Pendleton, Ore., and the company is capitalized at \$25,000.

### Best Month in History

DETROIT, April 16.—The Long Mfg. Company enjoyed the greatest month's business in its history in March, according to Arthur L. Swank, director of sales. The volume of clutch business exceeded any other month in the company's history by 100 per cent while radiatori production registered a gain of approximately 20 per cent, Mr. Swank declared.

## **Prices and Weights of Current Passenger Car Models**

## Prices and Weights of Current Passenger Car Models

SHIP WT. PASS. BODY STYLE. PRICE				
<b>LOCOMOBILE—Continued</b>				
"48"				
5089 4-p Sportif \$7,460	2500 5-p Touring \$1,025	..... 5-p Phaeton \$1,695	4185 4-p Roadster \$3,250	
5330 7-p Teuring 7,460	2690 4-p Sp. Roadster 1,175	..... 2-4-p Sport R'dster 1,695	4235 4-p Touring 3,250	
5640 7-p Teuring Lim. 9,500	2620 5-p Sp. Phaeton 1,095	3260 4-p Coupe 1,725	4250 4-p Cab-Roadster 3,450	
5600 5-p Victoria Sed. 10,050	2745 5-p 2d. Sedan 1,095	..... 4-p Sedan 1,895	4407 4-p Coupe 3,350	
5646 6-p Brougham 10,040	2705 3-p Landau Coupe 1,125	3410 5-p Sedan 1,895	4515 5-p Std. Sedan 3,350	
5363 7-p Enc. Dr. Lim. 10,050	2355 5-p 4d. Sedan 1,195	3460 5-p Landaulet 1,995	4640 7-p Sedan 2,550	
5624 7-p Cabriolet 10,300	2385 5-p Landau Sedan 1,295	"8-89"		
<b>McFARLAN "TV"</b>				
4000 2-p Roadster \$5,400	2335 5-p Touring \$875	(133½ in. W. B.)		
4500 4-p Sp. Touring 5,600	2490 5-p Sp. Touring 980	3850 2-4-p Roadster \$2,995	4580 4-p Roadster \$3,850	
4900 4-p Coupe 6,720	2317 4-p Del. Roadster 975	4125 5-p Sedan 3,095	4600 4-p Touring 3,850	
5200 4-p Tour. Sedan 6,720	2450 2-p Coupe 925	4200 7-p Sedan 3,495	4400 4-p Cab. Roadster 4,250	
5200 7-p Tour. Sedan 6,810	2570 5-p Coach 950	4275 5-p Ber. Limousine 3,795	4425 4-p Coupe 4,250	
..... 6-p Sedan 6,720	2533 2-p DeLuxe Coupe 990	(126 in. W. B.)		
..... 7-p Sedan 6,810	2650 4-p Sport Coupe 1,035	..... 5-p Coupe \$3,795	4450 5-p Sedan 4,350	
..... 7-p Spec. Sedan 6,810	2720 5-p DeLuxe Coach 1,050	4050 5-p Sedan 2,995	4475 7-p Sedan 4,450	
..... 7-p Enc. Sedan 7,110	2625 5-p Sedan 1,025	PIERCE-ARROW		
..... 7-p Sub. Sedan 7,110	2780 5-p DeLuxe Sedan 1,125	"90"		
5200 7-p Town Car 9,000	2780 5-p Landau 1,190	3285 3-p Runabout \$2,895	3945 3-p Du. Roadster \$1,160	
<b>"Straight 8"</b>				
3400 2-p Roadster \$2,650	1985 5-p Touring \$625	3300 4-p Phaeton 3,095	3830 3-p Sport Roadster 1,195	
3400 6-p Touring 2,650	1930 2-4-p Roadster 695	3440 7-p Phaeton 2,895	3895 5-p Du. Phaeton 1,180	
3450 7-p Touring 2,750	2025 3-p Coupe 625	3470 5-p Coach 2d. 2,995	3955 3-p Country Club 1,205	
3400 4-p Roadster 3,050	2075 5-p Coach 625	3405 2-p Coupe 3,100	3210 5-p Coach 1,230	
3650 5-p Sedan 3,180	3185 5-p Sedan 725	3450 2-4-p Coupe 3,200	3115 5-p Sedan 1,330	
3650 6-p Sub. Sedan 3,380	2230 5-p Landau 755	3525 5-p Coach 4d 3,250	3235 5-p Custom Sedan 1,335	
3700 7-p Sedan 3,280	(133 in. W. B.)	3565 5-p Club Sedan 3,300	3130 4-p Cus. Victoria 1,325	
3700 7-p Sub. Sedan 3,480	3270 5-p Touring \$755	3620 7-p Coach 3,350	Special Six	
3650 4-p Coupe 3,180	2225 2-4-p Roadster 825	3570 5-p Club Sed. Iand. 3,400	3430 2-4-p Sp. Roadster \$1,630	
3750 5-p Broug. Coach 4,600	2305 2-p Coupe 795	3630 7-p Lim. Coach 3,450	3495 5-p Du. Phaeton 1,480	
<b>MARMON "Little Marmom"</b>				
3019 2-p Speedster \$1,895	2405 5-p Coach 795	3420 4-p Coupe 3,595	3470 5-p Coach 1,480	
3977 4-p Speedster 1,965	2440 5-p Sedan 875	3500 5-p Sedan 3,895	3620 5-p Brougham 1,830	
3054 2-p Coupe Rdster 1,995	2490 5-p Landau 925	3600 7-p Sedan 3,995	Big Six	
3053 2-p Coupe 1,995	(133 in. W. B.)	3660 7-p Enc. Dr. Lim. 4,945	(120 in. W. B.)	
3039 4-p Sedan 2d. 1,795	3445 4-p Roadster \$2,350	4560 2-p Runabout \$5,875	3445 3-p Du. Roadster \$1,530	
3092 4-p Sedan 4d. 1,995	3590 5-p Phaeton 2,250	4510 4-p Touring 5,875	3485 2-4-p Sport Roadster 1,495	
3119 5-p Cus. Sedan 2W 2,595	3925 5-p Sedan 2,350	4580 3-p Coupe 5,875	3530 5-p Sport Phaeton 1,445	
3172 5-p Cus. Sedan 3W 2,595	(133 in. W. B.)	4815 7-p Sedan 5,875	3510 5-p Club Coupe 1,480	
3116 4-p Cus. Victoria 2,595	3790 7-p Touring \$2,785	4795 4-p Coupe Sedan 5,875	3705 4-p Cus. Victoria 1,645	
3040 4-p Cus. Town Cab 3,125	3925 4-p Coupe 2,685	4870 7-p Enclosed Lim. 5,875	3835 5-p Custom-Bro'm 1,585	
<b>"E-75"</b>				
4251 2-p Speedster \$3,485	4070 7-p Sedan 2,785	4740 7-p French Lim. 7,500	(127 in. W. B.)	
4256 4-p Speedster 3,485	4015 5-p Club Sedan 2,725	4840 7-p Sedan Landau 6,000	3720 7-p Du. Phaeton \$1,810	
4017 5-p Phaeton 2,485	4130 7-p Sedan Lim. 2,885	4840 7-p Enc. Land. 6,000	3910 5-p Brougham 4d. 2,130	
4480 7-p Tour. Speedster 3,565	4110 4-p Runabout \$3,850	4800 4-p Sedan Landau 6,000	4050 7-p The President 2,245	
4374 2-p Coupe R'dster 3,565	4130 5-p Phaeton 3,750	4830 4-p Sedan 6,000	STUTZ "AA"	
4452 5-p Town Coupe 3,195	4175 4-p Coupe 4,750	4865 7-p French Landau 8,000	(131 in. W. B.)	
4373 2-p Coupe 3,485	4475 5-p Sedan 4,750	PONTIAC "Six"		
4346 4-p Victoria 3,485	(143 in. W. B.)	2160 2-4-p Roadster \$775	2160 2-4-p Roadster \$775	
4255 5-p Brougham 3,565	4250 7-p Touring \$3,950	2270 3-p Coupe 775	2270 3-p Coupe 775	
4492 5-p Sedan 3,565	4550 5-p Club Sedan 4,890	2375 5-p 2d. Sedan 775	2375 5-p 2d. Sedan 775	
4220 7-p Sedan 3,640	4660 7-p Sedan 5,000	2345 4-p Sport Cab. 835	2345 4-p Sport Cab. 835	
4515 5-p Custom Sedan 3,960	4700 7-p Sedan Lim. 5,100	2455 5-p Landau Sedan 895	2455 5-p Landau Sedan 895	
4678 7-p Custom Sedan 4,075	(143 in. W. B.)	2610 5-p Del. Lan. Sed. 975	(145 in. W. B.)	
4718 7-p Custom Lim. 4,175	4130 7-p Limousine 2,145	PAIGE "6-45"		
<b>MOON "6-69"</b>				
2295 3-p Roadster \$995	2660 5-p Touring \$1,095	3200 5-p Sedan \$1,795	4556 6-p Tour. Bro'm \$3,685	
2340 6-p Phaeton 995	2615 4-p Cab R'dster 1,095	3170 5-p Bro'm. Vict. 1,845	4656 7-p Sedan 3,685	
2320 3-5-p Del. Roadster 1,095	2525 2-p Coupe 1,095	4731 7-p Sedan Lim. 3,785	4731 7-p Sedan Lim. 3,785	
2330 3-5-p Roy. Roadster 1,195	2760 5-p Sedan 1,195	REO "A"		
2375 3-5-p Cab. Roadster 1,195	(125 in. W. B.)	..... 2-p Roadster \$1,635	"AA De Luxe"	
2375 3-5-p Roy. Cab. 1,195	3420 7-p Touring \$1,655	..... 2-p Brougham 1,635	(131 in. W. B.)	
2420 5-p Roadster 1,295	3540 4-p Cab Roadster 1,995	3700 5-p Sport Coupe 1,635	4058 2-p Del. Speedstr' \$3,250	
2220 5-p Coach 1,045	3550 5-p Sedan 1,695	3400 5-p Sedan 1,845	4175 4-p Speedster 3,160	
2220 5-p Std. Brough. 1,145	3550 4-p Coupe 1,995	3440 4-p Victoria 1,845	4334 5-p Brougham 3,195	
2220 5-p Royal Bro'm 1,195	3550 7-p Sedan 1,995	3490 5-p Del. Sedan 1,995	4349 5-p Sedan 3,195	
2605 5-p 4d. Sedan 1,245	3765 7-p Sedan 1,995	RICKENBACKER "6-70"		
2605 5-p Royal Sedan 1,295	3805 7-p Limousine 2,145	3160 5-p Sedan \$1,595	4182 2-p Coupe 3,245	
Series "A"				
2600 5-p Roadster \$1,395	(118 in. W. B.)	3055 5-p Bro'm. Vict. 1,645	4176 4-p Vic. Coupe 3,175	
2550 5-p Touring 1,195	3055 4-p Roadster \$1,495	3055 5-p Sedan 1,645	4182 2-4-p Coupe 3,165	
2720 5-p Cab. Roadster 1,695	3215 5-p Brougham 1,395	3200 5-p Sedan \$1,795	4182 2-p Landau Sed. 3,345	
2710 5-p Del. Bro'm 1,395	3115 5-p Landau Bre'm 1,395	3170 5-p Bro'm. Vict. 1,845	(145 in. W. B.)	
2800 5-p Del. Sedan 4d. 1,545	3280 5-p Sedan 1,495	3200 5-p Sedan \$1,795	4566 5-p Tour. Bro'm \$3,835	
<b>NASH "Light Six"</b>				
2275 5-p Touring \$865	3570 7-p Touring \$2,295	3170 5-p Bro'm. Vict. 1,845	4656 7-p Sedan 3,835	
2310 2-p Coupe 925	3700 5-p Sedan 2,355	3200 5-p Sedan \$1,795	4656 7-p Sedan 3,835	
2440 5-p Sedan 925	3910 7-p Sedan 2,655	3170 5-p Sedan 2,795	4731 7-p Sedan Lim. 3,910	
2475 5-p Sedan 995	3690 4-p Cab R'dster. 2,655	ROAMER "8-78"		
..... "Special Six"	3700 4-p Coupe 2,655	3410 2-p Coupe \$1,985	3025 5-p Club. Phaeton \$1,450	
2900 2-p Roadster \$1,115	3950 7-p Limousine 2,795	3440 5-p Brougham 1,985	3335 4-p Coupe 1,585	
2950 5-p Touring 1,135	(125 in. W. B.)	3570 5-p Sedan 1,985	3175 5-p Spec. Sedan 1,585	
2980 4-p Roadster 1,225	3475 2-4-p Roadster \$1,295	PEERLESS "6-60"		
..... 2-p Coupe R'dster 1,345	3475 2-4-p Coupe R'dster 1,345	3650 5-p Tourer \$2,495	3350 5-p Royal Sedan 1,635	
3030 2-p Business Coupe 1,615	3575 5-p Sedan \$1,345	3880 5-p Sedan 2,985	WILLIS SAINTE CLAIRE "T-6"	
3160 5-p Sedan 2d. 1,215	3625 5-p Coupe \$2,295	3980 7-p Sedan 3,285	(127 in. W. B.)	
3170 5-p Sedan 1,315	3680 5-p Sedan 2,395	3410 2-p Coupe \$1,985	3675 5-p Traveler \$2,700	
3260 5-p Spec. Sedan 1,485	(125½ in. W. B.)	3440 5-p Brougham 1,985	3580 4-p Cab. R'dster 2,700	
3260 5-p Caval. Sed. 1,695	3625 5-p Coupe \$2,295	3570 5-p Sedan 1,985	3750 4-p Cab. Coupe 3,354	
"Advanced Six" (121 in. W. B.)				
3430 5-p Phaeton 1,995	3680 5-p Sedan 2,395	3650 5-p Tourer 2,495	3900 5-p Std. Sed. 3,150	
3430 7-p Touring \$1,490	2950 5-p Phaeton \$1,395	3880 5-p Sedan 2,985	3970 7-p Sedan 3,250	
3440 4-p Victoria 1,540	3025 2-4-p Roadster 1,495	3980 7-p Sedan 3,285	4080 7-p Limousine 3,354	
3550 5-p Sedan 2d. 1,425	3129 2-4-p Coupe 1,565	3410 2-p Coupe \$1,985	WILLYS-KNIGHT "66-A"	
3550 5-p Sedan 1,525	3225 7-p Limousine 2,695	3440 5-p Brougham 1,985	3675 5-p Roadster \$1,950	
3550 5-p Spec. Sedan 1,695	3575 5-p DeLuxe Sedan 2,795	3570 5-p Sedan 1,985	3684 5-p Touring 1,850	
..... Coupe 1,775	3650 7-p DeLuxe Sedan 2,995	3650 5-p Sedan 4d. 765	3684 5-p Cab. Coupe 2,295	
(127 in. W. B.)	2950 5-p Phaeton \$1,395	3700 5-p Sedan 1,985	3950 4-p Foursome Sed. 2,295	
3430 7-p Touring \$1,490	3025 2-4-p Coupe Roadster 1,565	3700 5-p Sedan 2,795	3975 5-p Sedan 2,295	
3440 4-p Victoria 1,790	3100 5-p Sedan 2,595	3700 5-p Sedan 3,285	"70-A"	
3750 5-p Coupe 1,990	3290 5-p Sedan 2,595	3700 5-p Sedan 3,285	3700 5-p Sedan 3,285	
3550 5-p Amb. Sed. 2,090	3310 5-p Sport Sedan 2,795	3700 5-p Sedan 3,285	3750 5-p Cab. Coupe 2,295	
3830 7-p Sedan 2,090	3140 5-p DeLuxe Sedan 1,795	3700 5-p Sedan 3,285	3750 5-p Sedan 3,285	

# Mechanical Specifications of Current Passenger Car Models

This list comprises cars distributed on a national basis

MAKE AND MODEL	WHEEL BASE (inches)	DEMI-STEER Tires Number of Tires	Mileage Miles Per Gallon	Bore and Stroke Number of Cyls.	ENGINE	ELECTRICAL SYSTEM	Generator System	Center-Make	Car Set-Make	Clutch-Type and Make	Gear Ratios	Tool-Type and Location	4-Wheel Type and Location	Steering Gear-Make	Rear Spur-Gear-Make	Lug-nut Spur-Gear-Make	Type and Description	Class and Model	REAR AXLE	BRAKES	ABBREVIATIONS— NAMES OF MFRS. OF STOCK PARTS	
																					Front Brakes	
Auburn.....6-66	120	29x5.25	Con....28L 6-2 1/2 x 4 1/2	19.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Ross	S-50%	Pr-A.	A-K—Atwater Kent	H—Horizontal (valves)	D—Multiple disk	P—Single plate	
Auburn.....8-77	125	31x6.00	Con....GT 8-2 1/2 x 4 1/2	19.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-L—Auto-Lite	H—External four wheels	E-F—Full elliptic	P—Thermo-syphon	
Auburn.....8-88	129-146	31x6.00	Loc...4IM 8-2 1/2 x 4 1/2	33.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-I—Alemite	H—Internal rear wheels	E-F—External four wheels	P—Cast iron	
Auburn.....115	120 & 128	31x6.00	Loc...4IM 8-2 1/2 x 4 1/2	33.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-U—Aniled	H—External transmission	E-F—Both internal and external four wheels	P—Universal	
Buck.....132	31x6.00	Loc...4IM 8-2 1/2 x 4 1/2	33.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-B—Borg & Beck	H—Bevel Gear Overhead shaft	E-F—Bevel Gear Overhead shaft	P—Var.		
Cadillac.....314	152-188	33x6.75	Loc...4IM 8-2 1/2 x 4 1/2	31.2	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-B—Brown-Jipe	H—Internal rear wheels	E-F—Internal rear wheels	P—Warner	
Case.....132	34x7.30	Loc...4IM 8-2 1/2 x 4 1/2	33.7	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-B—Ball & Ball	H—Front floating	E-F—Front floating	P—Westinghouse		
Case.....Y	122	33x6.00	Loc...4IM 8-2 1/2 x 4 1/2	27.3	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-B—Basic cups	H—Three-quarter elliptic	E-F—Three-quarter elliptic	P—Morse	
Chrysler.....Big 6	124	33x8.00	Loc...4IM 8-2 1/2 x 4 1/2	20.4	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-C—Cartier Products	H—Cone	E-F—Cone	P—Standard	
Chrysler.....Sed. 6	108 1/2	30x6.00	Loc...4IM 8-2 1/2 x 4 1/2	21.6	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-D—Delco Products	H—Grease cups	E-F—Grease cups	P—Zerk	
Chrysler.....Spec. 6	115	31x5.25	Open Spec. 6-3 1/2 x 4 1/2	23.4	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-E—Detroit	H—Grease cups with wide feed	E-F—Grease cups with wide feed	P—Tiltoaken	
Chrysler.....Royal St. 8	124	32x6.00	Loc...4IM 8-2 1/2 x 4 1/2	33.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-F—Dodge-Ramsey	H—Continental	E-F—Continental	P—Universal	
Chevrolet.....AA	103	32x6.40	Loc...4IM 8-2 1/2 x 4 1/2	21.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-G—Globe & Girdle	H—Climax	E-F—Climax	P—Globe & Girdle	
Chrysler....."80"	185-198 1/2	30x6.75	Loc...4IM 8-2 1/2 x 4 1/2	20.4	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-H—Hoover	H—Grease cups	E-F—Grease cups	P—Grease cups	
Chrysler....."50"	163 1/2	29x4.75	Loc...4IM 8-2 1/2 x 4 1/2	21.0	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-I—Hood	H—Grease cups	E-F—Grease cups	P—Grease cups	
Chrysler....."60"	156 1/2	28x5.25	Loc...4IM 8-2 1/2 x 4 1/2	21.6	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-J—Johnson	H—Grease cups	E-F—Grease cups	P—Grease cups	
Chrysler....."70"	162 1/2	31x5.25	Loc...4IM 8-2 1/2 x 4 1/2	23.4	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-K—Kodak	H—Grease cups	E-F—Grease cups	P—Grease cups	
Chrysler.....V-7	132 1/2	33x6.75	Loc...4IM 8-2 1/2 x 4 1/2	45.0	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-L—Lester	H—Grease cups	E-F—Grease cups	P—Grease cups	
Cunningham.....	120	32x6.20	Loc...4IM 8-2 1/2 x 4 1/2	24.0	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-M—Merchandise	H—Grease cups	E-F—Grease cups	P—Grease cups	
Degmatis.....6-60	138	33x6.00	Loc...4IM 8-2 1/2 x 4 1/2	33.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-N—Nash	H—Grease cups	E-F—Grease cups	P—Grease cups	
Davis.....92-27	115	33x6.00	Loc...4IM 8-2 1/2 x 4 1/2	25.3	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-O—Oldsmobile	H—Grease cups	E-F—Grease cups	P—Grease cups	
Davis.....Series 98	110	29x4.95	Loc...4IM 8-2 1/2 x 4 1/2	19.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-P—Pierce	H—Grease cups	E-F—Grease cups	P—Grease cups	
Davis.....St. 8	119	32x6.00	Loc...4IM 8-2 1/2 x 4 1/2	24.2	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-Q—Puller	H—Grease cups	E-F—Grease cups	P—Grease cups	
Davis....."80"	125 1/2	31x5.25	Loc...4IM 8-2 1/2 x 4 1/2	24.2	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-R—Rambler	H—Grease cups	E-F—Grease cups	P—Grease cups	
Dodge Brothers.....E	116	31x5.25	Loc...4IM 8-2 1/2 x 4 1/2	24.0	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-S—Singer	H—Grease cups	E-F—Grease cups	P—Grease cups	
DuPont.....E	125	31x5.25	Loc...4IM 8-2 1/2 x 4 1/2	24.0	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-T—Tucker	H—Grease cups	E-F—Grease cups	P—Grease cups	
Escar.....E-70	117	28x5.25	Loc...4IM 8-2 1/2 x 4 1/2	27.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-U—U.S. Steel	H—Grease cups	E-F—Grease cups	P—Grease cups	
Escar.....E-82	123	30x6.00	Loc...4IM 8-2 1/2 x 4 1/2	24.2	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-V—Vauxhall	H—Grease cups	E-F—Grease cups	P—Grease cups	
Escar.....E-90	127-132	32x6.20	Loc...4IM 8-2 1/2 x 4 1/2	24.2	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-W—Willys	H—Grease cups	E-F—Grease cups	P—Grease cups	
Erskine.....6	107	29x4.40	Loc...4IM 8-2 1/2 x 4 1/2	26.4	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-X—Xenon	H—Grease cups	E-F—Grease cups	P—Grease cups	
Ease.....Super Six	110 1/2	31x6.00	Loc...4IM 8-2 1/2 x 4 1/2	28.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-Y—Yellow	H—Grease cups	E-F—Grease cups	P—Grease cups	
Falcon-Knight.....Z-18	100 1/2	30x5.50	Loc...4IM 8-2 1/2 x 4 1/2	27.7	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-Z—Zephyr	H—Grease cups	E-F—Grease cups	P—Grease cups	
Flint.....60	110	30x5.25	Loc...4IM 8-2 1/2 x 4 1/2	18.1	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-B—Bentley	H—Grease cups	E-F—Grease cups	P—Grease cups	
Flint.....60	115	30x5.75	Loc...4IM 8-2 1/2 x 4 1/2	26.3	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-C—Cord	H—Grease cups	E-F—Grease cups	P—Grease cups	
Ford.....60	120	32x6.20	Loc...4IM 8-2 1/2 x 4 1/2	27.3	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-D—DeSoto	H—Grease cups	E-F—Grease cups	P—Grease cups	
Ford.....T	100	29x4.40	Loc...4IM 8-2 1/2 x 4 1/2	22.5	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-E—Edison	H—Grease cups	E-F—Grease cups	P—Grease cups	
Ford.....11-B	119	32x6.00	Loc...4IM 8-2 1/2 x 4 1/2	25.3	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-F—Fiat	H—Grease cups	E-F—Grease cups	P—Grease cups	
Gardner.....80	122	30x6.00	Loc...4IM 8-2 1/2 x 4 1/2	24.2	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-G—General	H—Grease cups	E-F—Grease cups	P—Grease cups	
Gardner.....90	130	32x6.00	Loc...4IM 8-2 1/2 x 4 1/2	25.3	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-H—Hudson	H—Grease cups	E-F—Grease cups	P—Grease cups	
Hudson.....Super 6-A-1	114	31x6.00	Loc...4IM 8-2 1/2 x 4 1/2	23.4	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-I—Imperial	H—Grease cups	E-F—Grease cups	P—Grease cups	
Hudson.....E-3	125	32x6.00	Loc...4IM 8-2 1/2 x 4 1/2	28.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-J—Jaguar	H—Grease cups	E-F—Grease cups	P—Grease cups	
Jordan.....R	107	120	Loc...4IM 8-2 1/2 x 4 1/2	25.3	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-K—Kaiser	H—Grease cups	E-F—Grease cups	P—Grease cups	
Jordan.....AA	110	32x6.00	Loc...4IM 8-2 1/2 x 4 1/2	28.8	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-L—Lancia	H—Grease cups	E-F—Grease cups	P—Grease cups	
Jordan.....J-1	116	32x6.00	Loc...4IM 8-2 1/2 x 4 1/2	26.4	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-M—Mercury	H—Grease cups	E-F—Grease cups	P—Grease cups	
Kissel.....6-55	124	32x6.00	Loc...4IM 8-2 1/2 x 4 1/2	26.3	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac.	S-50%	Pr-A.	A-N—Nash	H—Grease cups	E-F—Grease cups	P—Grease cups	
Kissel.....8-65	125	32x6.00	Loc...4IM 8-2 1/2 x 4 1/2	32.6	L Ch..C.I.	D.R.	P.Long.	War...	N D.R.-D.R.-D.R.	B-F-E-T	4.9	4.7	B-F-E-T	M	Jac							



# The LaSALLE greatly increases sales volume of CADILLAC dealers . . .

**A**LREADY the experience of Cadillac dealers with the LaSalle is proving how important is the new opportunity which the double franchise for the Cadillac and its companion car creates.

Strong, successful dealers in every part of America are eagerly applying for the Cadillac-LaSalle contract.

The Cadillac dealer organization is being conservatively enlarged to care for the wider demand which has come

with the advent of the LaSalle—and each franchise applicant is receiving the most careful consideration. The chief requirements are aggressive merchandising ability, adequate service facilities, sound business methods and sufficient capital or bank credit.

Please make your confidential inquiry of a Cadillac distributor or direct to the Sales Department, Cadillac factory.

C A D I L L A C   M O T O R   C A R   C O M P A N Y

*Detroit, Michigan*

*Oshawa, Canada*

*Division of General Motors Corporation*



Mechanical Specifications of Current Passenger Car Models—Continued. (From page 40)

WAKE AND MODEL

- |                                      |       |     |
|--------------------------------------|-------|-----|
| Lacembie.....                        | 8-66  | B-F |
| Lacembie.....                        | 8-80  |     |
| Lacembie.....                        | 48    |     |
| Lacembie.....                        | "90"  |     |
| Marmen.....Little<br>Marmen.....E-15 |       |     |
| McFarlan.....St. 8                   |       |     |
| McFarlan.....TV                      |       |     |
| Series A.....                        |       |     |
| Mean.....Series A                    |       |     |
| Moon.....Light Six                   | 6-60  |     |
| Nash.....Advanced                    | 1/    |     |
| Nash.....Special                     |       |     |
| Oakland.....46                       |       |     |
| Oldmobile.....300E                   |       |     |
| Overland.....(4) Whippet             |       |     |
| Overland.....(6) Whippet             |       |     |
| Packard.....6                        | 1/    |     |
| Packard.....8                        | 1/    |     |
| Paige.....6-15                       |       |     |
| Paige.....6-75                       |       |     |
| Paige.....6-45                       |       |     |
| Paige.....8-85                       |       |     |
| Pearless.....6-60                    |       |     |
| Pearless.....6-72                    | 1/    |     |
| Pearless.....8-60                    |       |     |
| Pearless.....8-69                    | 1/    |     |
| Pierce Arrow.....36                  |       |     |
| Pontiac.....80                       |       |     |
| Reno.....A                           |       |     |
| Rickenbacker.....6-70                |       |     |
| Rickenbacker.....8-80                |       |     |
| Rasmer.....8-78                      |       |     |
| Rasmer.....8-80                      |       |     |
| Rolls Royce.....Silver Ghost         | 8-88  |     |
| Rolls Royce....New Phantom           | 14-16 |     |
| Star.....4                           |       |     |
| Star.....6                           |       |     |
| Steans Knight.....F-6-85             |       |     |
| Steans Knight.....G-8                |       |     |
| Studebaker.....Sed.                  | 6     |     |
| Studebaker.....Spec. 6               |       |     |
| Studebaker.....Big 6                 |       |     |
| Stutz.....AA 131                     |       |     |
| Vale.....Sed. 50                     |       |     |
| Vale.....Spec. 60                    |       |     |
| With Ste. Clare.....76               |       |     |
| Willys Knight.....66-A               |       |     |
| Willys Knight.....70-A               |       |     |

*This advertisement appeared in the Saturday Evening Post and other magazines.*

• THEN  
YOU, TOO,  
WILL CHOOSE AN  
OLDSMOBILE

The thousands and thousands of enthusiastic owners of Oldsmobile, saw it, drove it, knew it—and then chose it for their own. And . . . when you hear their whole-hearted praise and the conclusive evidence of ever-increasing popularity . . . When you, too, come to your Oldsmobile showroom . . . When you, too, see Oldsmobile and check it, point by point, against all the known factors of merit in modern motor cars . . . When you, too, drive it and experience its thrilling performance, its effortless handling, its positive control . . . When you, too, know it and realize its surpassing beauty, its complete provisions for enduring efficiency, thrifty operation, comfort, convenience and long life . . .

...then you, too, will choose an Oldsmobile!

DELUXE ROADSTER '27 F.O.B. LANSING

OLDSMOBILE

★ What justifies this prophecy\* is the actual fact that in the average case those who try it buy it.

For proof, examine Oldsmobile sales.

In the last year they have increased many times more than those of the industry as a whole.

You must keep your eye on a car like that.

It certainly has something the public wants and seeks.

What it has are the known factors of motor car merit, combined with beauty and luxury . . . at a price that suits the average purse.

# OLDSMOBILE

Product of GENERAL MOTORS

*This is the time of Year  
to Get that Profitable  
Starting-Lighting and Ignition Business.  
And—This is How  
to Get it—~*

You need a Weidenhoff Test Bench for the many profit-making jobs that are now in search of the right shop, properly equipped.

Times have changed. The car owner is well posted. You cannot stall him—or delay his job.

With the Weidenhoff Super-Service Test Bench, you service all Starting, Lighting and Ignition work in a masterly manner—showing your customer the exact cause of his electrical trouble—and get to the seat of the trouble quickly.

After completing the job, for instance, if it is the generator, you can test it fully before replacing it in the car.

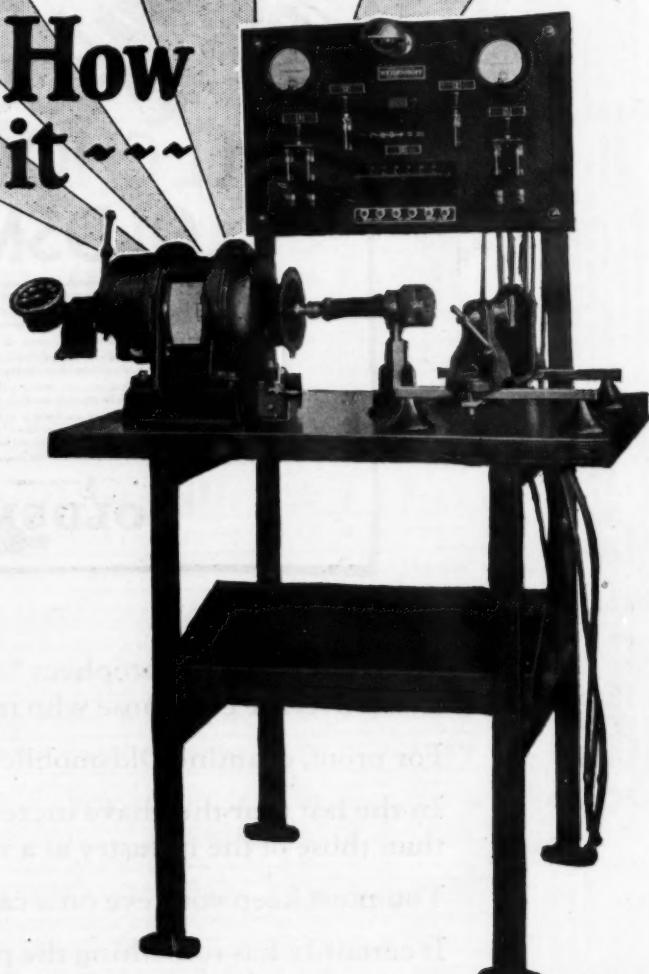
75 educational institutions now use Weidenhoff Test Benches in instruction.

Prominent car manufacturers use them in their service stations.

Thousands of battery and electrical service stations now have them.

Low in price—easy monthly payments.

Quick delivery through our distributor near you. Write for illustrated catalog.



# WEIDENHOFF

Test benches for Ignition, Starting and Lighting Units. Constant Potential Charging Equipment. Lathes for Armature Work. Commutator Mica Undercutters. Armature Testers. Bearing and Gear Pullers. Battery Discharge Sets. Cell Testers. Magnetizers.

**Shop Equipment  
for Battery and Electrical Service  
4358 Roosevelt Road, Chicago, Ill.**

JOS. WEIDENHOFF, 4358 ROOSEVELT ROAD, CHICAGO, ILL.

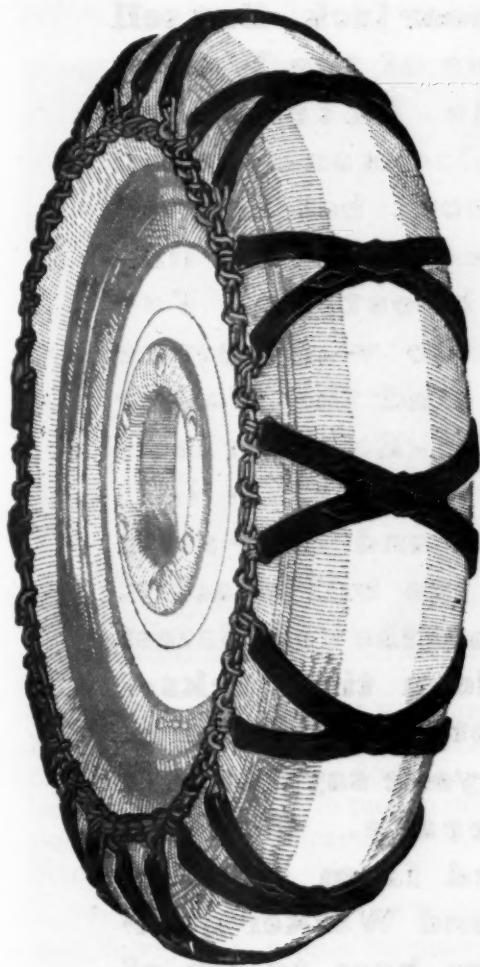
*For Full Particulars on Weidenhoff Test Benches Write Your Name and Address on This Coupon*

*"Watch  
Weidenhoff"*

CATALOG No. 25

# Now / an "All Season" Business

## Rubber Chains A Profitable Line 12 Months a Year



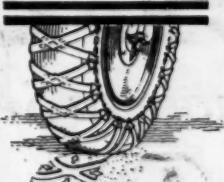
Gates Rubber Chains for Tires are providing dealers with a 12-month, year-round chain business that is bringing extra sales and extra profits.

Spring and Summer rains bring muddy, slippery roads and a real need for the safety and protection which rubber chains give. The X-shaped rubber cross links of the Gates Chain give these definite advantages:—

1. **Longer Wear.** Made of tough, re-inforced wear-resisting rubber, they will in most cases out-wear several sets of ordinary chains.
2. **Noiseless.** The rubber cross links are as quiet as the rubber tread of your tire—no banging against fenders or clanking on the pavement.
3. **Protection to Tires.** They do not injure the tires because the wide rubber cross links do not bite into the tread or bruise the tires—they add miles instead of taking them away.
4. **Convenient.** Easy to put on because the rubber cross links naturally lie flat without twisting or tangling like ordinary chains.
5. **Greater Safety.** Gates Chains protect against side-skidding. The X-shaped cross links grip the road in four directions. This stops the side-slip on muddy roads and gives you the protection that you want.

Gates Rubber Chains are fully guaranteed. They are delivering satisfaction and are building a profitable "all-season" business for the dealers who are selling them.

Manufactured by The Gates Rubber Company, Denver, U. S. A.

**GATES**  **4 WAY GRIP CHAINS**

**4 Way Grip - No Side Slip**

# The Latest in Balloon Tire Jacks



No. 525

**A Real Balloon Tire Jack**

This is the finest passenger car jack Walker ever built—designed especially for heavy cars with balloon tires. Gear reduction and large ball bearings make lifting easy with 48 inch folding crank handle. Height 7½ inches. Raise 8½ inches. List price \$6.85.



No. 520

These two jacks operate on the same principle as the No. 525. They are merely designed for lighter work and do not embody the gear reduction feature. The No. 520 is for medium weight cars and lists at \$5.00. The No. 515 for light cars lists at \$4.00.



No. 515

**YOU'LL never make a friend or a customer out of a man by selling him a poor jack. But sell him one of the Walker Double - Extension - Screw Jacks and you can just about bet he will become one of your life-long boosters. For people do want better jacks. And the Walker Double-Extension-Screw Models—Nos. 525, 520 and 515—seem to fill the bill exactly. These are the very latest in balloon tire jacks—compact, powerful and, as everyone says, so easy to operate. Walker designed from start to finish and Walker quality from base to tip of handle.**

*Willard Walker*  
President  
Walker Manufacturing Company  
Racine, Wisconsin

# Walker Jacks

*"Dependable in Service"*

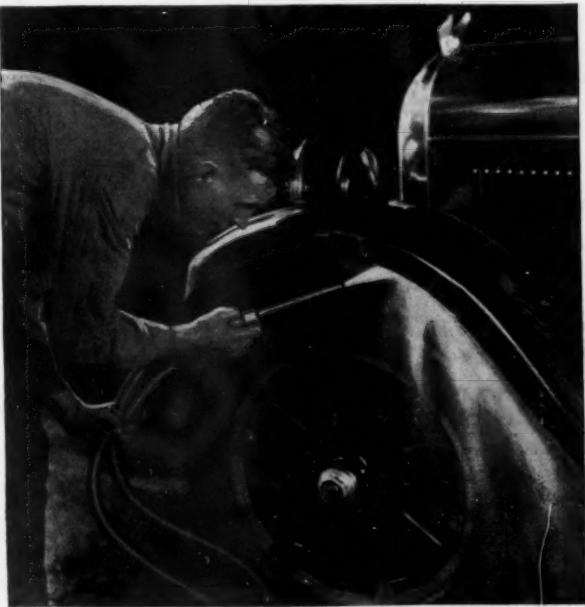


**CURTIS COMPRESSORS, HOISTS, CRANES, CAR WASH SYSTEMS, PORTABLE COMPRESSOR UNITS**

# Get a COMPLETE Cleaning Service—for big profits!

The successful garage man or car dealer is the one who makes profits where the other fellow has

drying, polish spraying, paint spraying, vacuum cleaning, engine washing—a complete cleaning service for the inside and the outside of the car.



losses. For example, car washing! Hand methods do not pay. Most car washing jobs are done at a loss—or at least fail to pay in proportion to the floor space and labor involved.

The Curtis AIR-MIST System builds new profits because it provides a more complete cleaning service, not just a wash, and because it does faster as well as better work.

Only the Curtis AIR-MIST provides air for tire inflation, for

complete information quickly.

The Curtis Pneumatic Machinery Company is 73 years old, and for 30 years has specialized on pneumatic engineering and high-grade compressor manufacturing. Wherever compressed air will do the job better, Curtis can help you.

The AIR-MIST System does not blast off the dirt with a solid-water stream. It softens the caked mud with a penetrating air-and-water spray, and flows the soaked dirt off gently and rapidly, and *does not harm the finish of the car*. The AIR-MIST is fast, but absolutely safe.

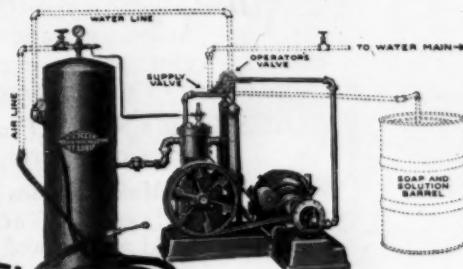
The progressive garage or car dealer looking for new profits should investigate the Curtis AIR-MIST System at once. The coupon will bring



**The World Rides on Curtis Air!**

The Air-Mist System is built and guaranteed by the makers of the famous Curtis Compressor, which is more widely used for tire inflation throughout the world than any other compressor. Most of the nearly 25 million carowners in Europe, Asia, Africa, Australia and the Americas "ride on Curtis air".

Likewise, compressed air for rock drilling, pavement breaking, materials handling, paint spraying and scores of other uses in factory and field is supplied by Curtis Compressors.



**MAIL COUPON TODAY**  
CURTIS Pneumatic Machinery Co.  
1957 Kienlen Ave., ST. LOUIS, Mo.  
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Please send me, without obligation,  
your new free "AIR MIST" catalog.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_  
A-4



# CURTIS AIR-MIST CAR-WASH SYSTEM

*with Westco water amplifier*

**CURTIS PNEUMATIC MACHINERY COMPANY, ST. LOUIS, U.S.A.**

---

**A WORTHWHILE INSTITUTION**

---

Last Year Our Special

## SALES AND SERVICE REFERENCE NUMBER

registered tremendously in the success column with upwards of 25,000 of the country's best dealers and service station owners.

The paid circulation of *Motor Age* is composed of the most important buying units in the automotive trade—the men who sell and service a major percentage of all automotive products—the men who can underwrite the sales success of any manufacturer whose product possesses merit.

The 1927 Annual Sales and Service Reference Number will be published May 5.

Its editorial objective is expressed in three words: "Better Than Ever."

The theme of the issue will be:

## How to Sell Automotive Merchandise and Service at a Profit

Among the important editorial features will be—

***Motor Age Flat Rate Manual:*** A new kind of manual. More comprehensive. Simplified. A real guide to shop profits.

***Repair Standards Chart:*** A diagrammatic showing of how to determine when moving parts are properly fitted, when they are serviceable, and when they need replacing.

***Dealer's Passenger Car Directory:*** Alphabetical list of all American made cars, name and address of maker, type engine, price range and other facts daily needed by the country's service executives.

***Sales and Service Profit Data on:*** New and used cars, parts, accessories, tires, fuel, lubricants and maintenance.

***Money-Making Sales Plans:*** An imposing array of human interest stories of actual men who have done actual things to build actual profits in sales and servicing.

***Electrical Equipment on 1927 Cars:*** Data that every maintenance establishment needs every day.

In total it will be filled with indispensable reference data of a kind that will be of maximum usefulness and value in every sales and service station in the country.

As a vehicle to successfully carry the advertiser's message to the most important elements of the trade, this issue—to be out May 5—will be of outstanding value. No advance in rates. Plan your copy now. Its early receipt will advance mutual interests.

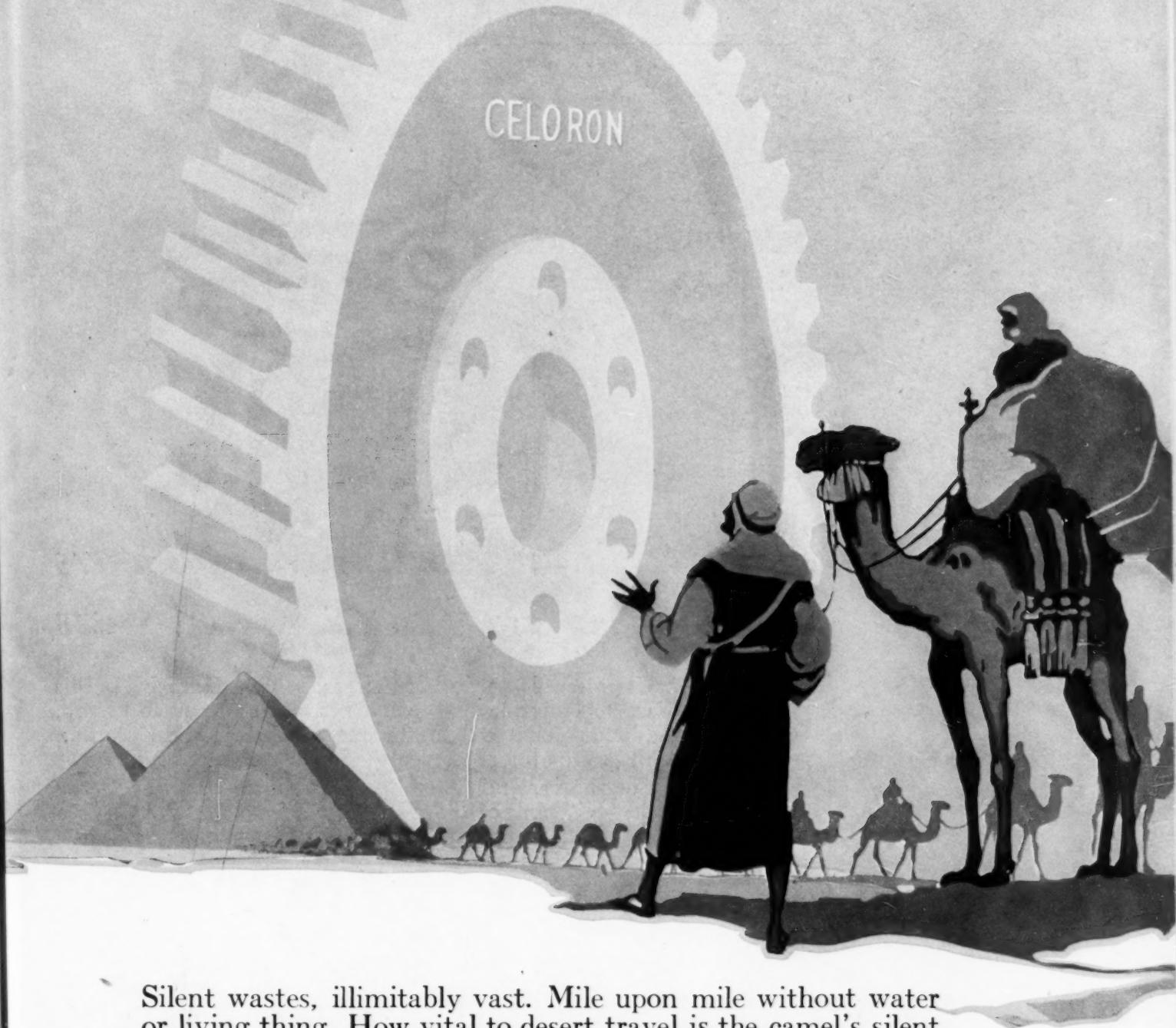
# MOTOR AGE

*A Chilton Class Journal Publication*

5 S. WABASH AVENUE CHICAGO

SILENT

CELORON



Silent wastes, illimitably vast. Mile upon mile without water or living thing. How vital to desert travel is the camel's silent endurance!

And how vital to the motor is the enduring silence which Celoron Silent Timing Gears bring to its mechanism! Quiet, resilient, they hush the grind and chatter of metal upon metal. Permanently true, they contribute mightily to that smooth, silent flow of effortless power which is the fruit of perfect timing.

**CELORON**  
**TIMING GEARS**



**Treated:** After Celoron Timing Gears are moulded, they are subjected to an exclusive Celoron treatment which makes them permanently impervious to hot or cold oil, water or grease.

## Now You Can Sell Celoron Silent Timing Gears for Even the Lowest-Priced Cars

### Celoron Timing Gears Non-metallic and re- silient:—

1. Eliminate metal-to-metal contact.
2. Silent at all speeds and stay silent permanently.
3. Save every part of the timing mechanism from the effects of vibration and shock.
4. Accurately cut, they keep timing accurate.
5. Grease-proof, oil-proof, water-proof — will not warp or swell.

THE present low prices of Celoron Timing Gears bring this famous enduring silence and permanent accurate timing, once a luxury found only in the finest American and European motors, to the owners of even the lowest-priced cars.

Think of the vast new market that this has opened to your repair shop. Think of the many more customers it brings to your doors—the many new opportunities to win lasting owner good-will through the superior performance of these better timing gears—the increased *profits* for your business.

The enormous volume production of the plants manufacturing Celoron Timing Gears and the steadily growing public preference which compels this production schedule have been responsible for the constantly lowering level of Celoron prices—a trend which in turn offers greater opportunities for the building of Celoron sales to new high peaks.

It is an old and hackneyed saying that "nothing succeeds like success"; yet its truth still remains undisputed.

You—like every other Repair Shop or Service Station Owner in America—can get Celoron Silent Timing Gears for all makes and models of cars—*overnight or sooner*. Ample stocks carried by N.A.P.A. Jobbers and Distributors, all over the country, assure this prompt time and money-saving service.

Write today for a Celoron Silent Timing Gear List showing the specifications for all cars, and *prices*.

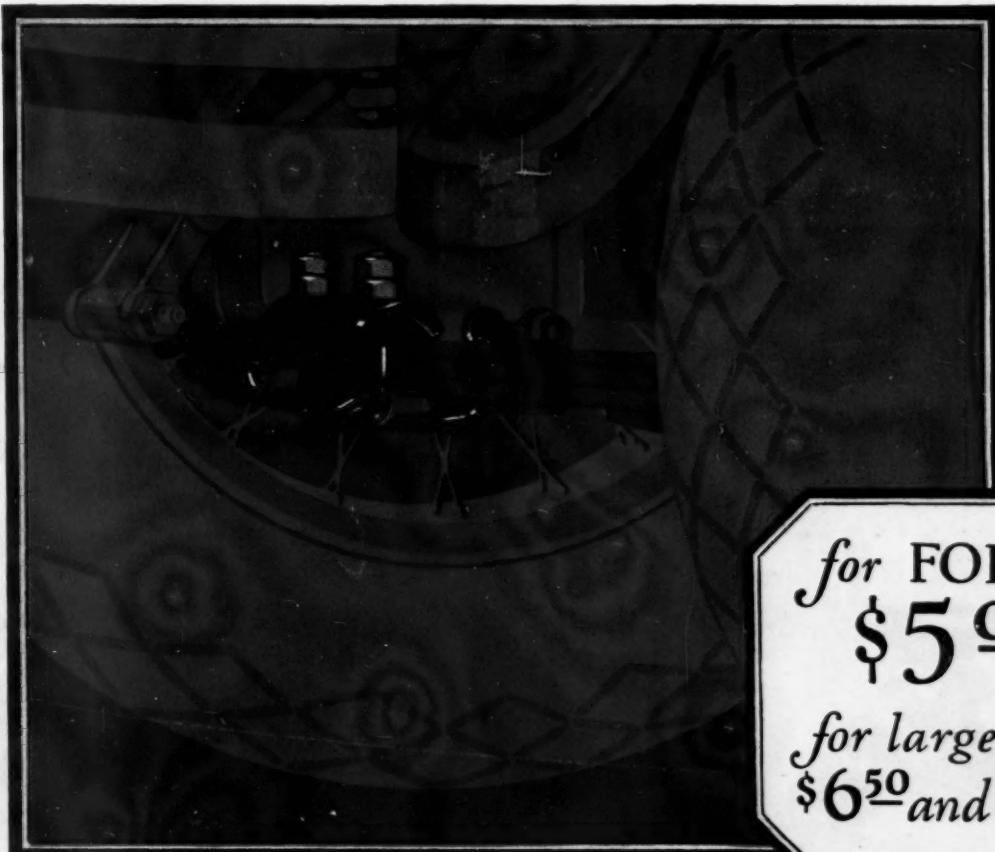
## THE CELORON COMPANY

Division of Diamond State Fibre Company

BRIDGEPORT, PENNSYLVANIA.

Laminated Products, Moulding Powders and Varnishes

In Canada: 350 Eastern Ave., Toronto



*for FORDS*  
**\$5 00**  
*for larger Cars*  
**\$6<sup>50</sup> and \$8 00**

## A Knockout for Bumps

HERE'S the simplest product ever perfected for making smooth roads out of rough ones—the McKay Spring Controller.

It hardly seems possible that this simple device will have such a remarkable effect on riding comfort—yet it has proved itself the equal of many high-priced shock absorbers.

Anybody can put on a set of McKay Spring Controllers. Only three parts to each controller. Slip the controller on the spring—tighten the nuts with a wrench—and *that's all*. No lubrication. No attention after it's adjusted.

Simple to stock, too. No service to render. Four uniform-size packages cover all makes of cars. Car reference list on each package makes it easy to select the right set every time.

### Here's How They Do the Job

McKay Spring Controllers give perfect control of spring action. They act as part of the springs—keeping them under two-way tension all the time. By pressing the spring leaves together and increasing interleaf friction they control the action through bound and rebound. The result is surprising smoothness of spring action. Also, they reduce spring breakage. McKays are guaranteed for the life of the car.

UNITED STATES CHAIN & FORGING COMPANY, UNION TRUST BUILDING, PITTSBURGH, PA.

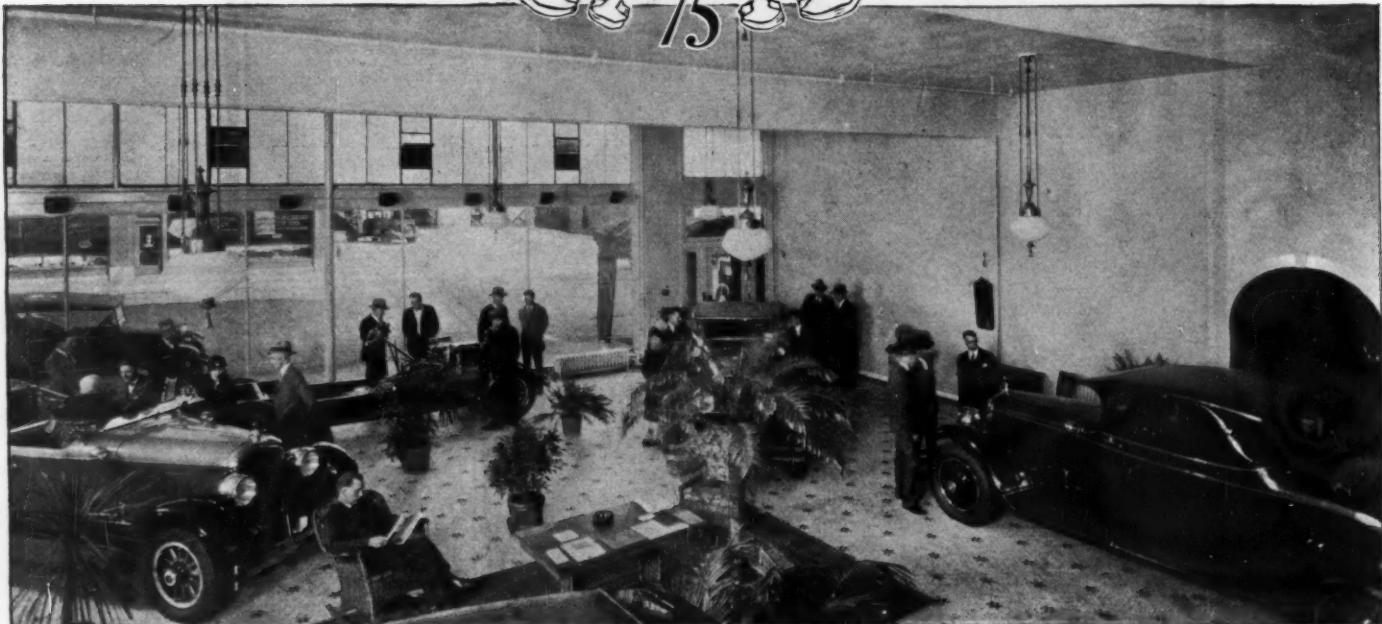
## MCKAY SPRING CONTROLLERS

---

**MCK**



THE LARGE  
**MARMON**  
75



*A record of 35 new car sales in 60 days and numerous unfilled orders on hand is evidence that every day brings results for retail salesmen in these two sales rooms of Marmon Motors, Inc., Kansas City*



The little  
**MARMON**  
8

# Two months with MARMON *in Kansas City*

In no other city in the country does Marmon have a more loyal and enthusiastic clientele than in Kansas City. But it was not until 60 days ago when the little Marmon 8 was introduced at the Kansas City show, that the real possibilities of Marmon in the Kansas City territory were fully realized.

Here's the report of Sidney L. Altschuler, president of Marmon Motors Inc., new Marmon distributors in Kansas City:

"In six weeks have sold 35 new Marmons, and have numerous unfilled orders on hand"—

"have given hundreds of demonstrations—and those only to prospects who are really interested".

"Official opening of our building packed with people—nation-wide interest in Mar-

mon has penetrated Kansas City and our entire territory".

When the public shows such confidence in and enthusiasm for a product—

—and when dealers, in every corner of the nation actually feel this approval it's quite indicative that the recent great developments at Marmon have a country-wide significance—

—and that Marmon's new idea is undeniably right in the eyes of the buying public.

Therein is the basis for the tremendous growth of the Marmon distributive organization—and also for the fact that Marmon is daily entertaining franchise applications from capable and experienced dealers in every size community—large and small. A few very desirable territories are still being held open.

MARMON MOTOR CAR COMPANY, INDIANAPOLIS, INDIANA



*Brakes Hold—Profits Grow*  
WITH  
**GRAFIELD BRAKE LINING**

**IT SELLS—Because**

- 1—It holds Wet or Dry.
- 2—It is graphite filled—prevents scoring of drums.
- 3—It is the only brake lining that has graphite mixed with crude asbestos.
- 4—It keeps squeaks out longer, generally eliminating them.
- 5—It stops car evenly—prevents locking brakes—reduces tire wear.
- 6—It assures greater safety through less variance in foot pressure.

**IT SATISFIES—Because**

Car washing—driving rain—slush or puddles—frictional heat—do not affect the smooth and positive grip of

**GRAFIELD**  
BRAKE LINING

**BRAKE REPAIRMEN BUY IT**

*More Profits For You*

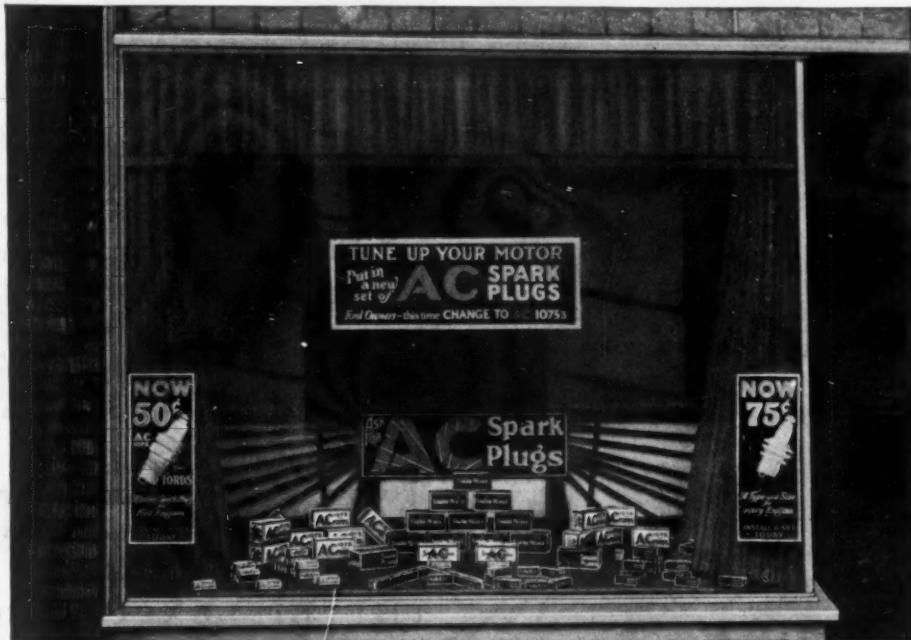
Let us give you complete information on  
*Grafield Brake Lining* and "Service Testing."

**WORLD BESTOS CORPORATION**

52 Courtland Street, Paterson, N. J.

**"Holds Wet or Dry—Holds Wet or Dry"**

# Change Spark Plugs After a Winter's Driving



Now is the time to go after spark plug business.

Every dealer can increase his spark plug sales and sell many sets by putting in an AC Window Trim and soliciting customers to buy a new set of spark plugs after a winter's driving.

AC Products, displayed as leaders in the window, will enable dealers not only to increase their sales on AC Products, but on other merchandise as well.

Material for display furnished gratis on request—simply write for an AC Window Trim.

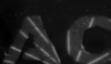
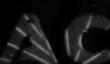
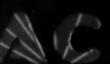
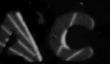
**AC Spark Plug Company, FLINT, Michigan**

**AC-SPHINX**  
Birmingham  
**ENGLAND**

Makers of **AC Spark Plugs**—**AC Speedometers**—**AC Air  
Cleaners**—**AC Oil Filters**—**AC Gasoline Strainers**

**AC-TITAN**  
Levallois-Perret  
**FRANCE**

Over 200 of the world's most successful manufacturers use one or more, or all of these AC Products

			
<b>SPARK PLUGS</b>	<b>SPEEDOMETERS</b>	<b>AIR CLEANERS</b>	<b>OIL FILTERS</b>

# Biflex

**T**HE Chicago Automobile Show is the acknowledged "dealers' show."

At this show there was an outstanding preference expressed for Biflex Bumpers . . . abundant proof that Biflex dominates the bumper market.

Indeed, so overwhelming was this preference that 153 Biflex Bumpers were displayed on cars—72% more than any other one make of bumper.

We cite the Chicago Show simply as an example of the nation-wide prestige of Biflex Bumpers! And what was true of the Chicago Show was true of many automobile shows the country over.

There is no doubt about it. Distributors and dealers everywhere are turning to Biflex as the one bumper that gives car owners the absolute protection they are now demanding. And even more than this—they are turning to Biflex because they know that Biflex, and

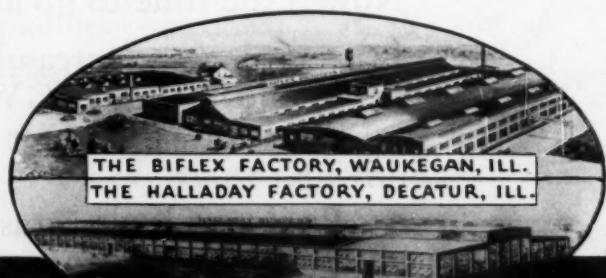
only Biflex, actually does help sell motor cars . . . especially in this highly competitive year.

Both Biflex and Halladay factories are now working at capacity. All former production records have been broken. Nothing like the present demand for Biflex and Halladay has ever before been known in the bumper business.

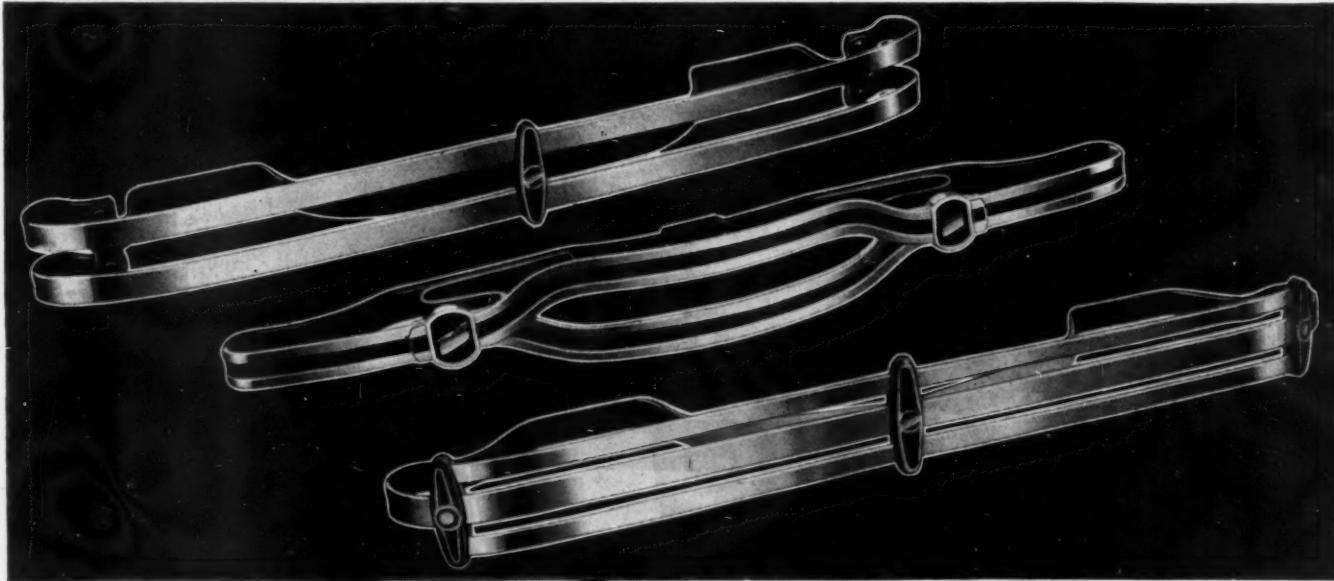
You will be doubly interested in Biflex now, because of the more attractive profits to dealers made possible through improved manufacturing methods.

It will pay you to write or wire immediately for complete information on the new Biflex proposition.

**THE BIFLEX CORPORATION  
WAUKEGAN - ILLINOIS**



*dominated*  
at the Chicago  
Show—**72%**  
*more than any other  
one make of bumper*



**Biflex** *Cushion  
Bumpers*

# F. L. Sanford says... "There is no question about it Budd-Michelin Dual Wheels help sell the truck"

**H**E ought to know. He's president of the F. L. Sanford Company, of Indianapolis, and his organization sells plenty of Graham Brothers trucks—on Budd Duals.

He says that Budd Duals give his salesmen a selling story that helps to get the name on the dotted line . . .

If the customer is making long hauls and needs speed—Budd Duals give it to him.

If he needs protection for fragile loads—Budd Duals provide it.

If he wants better traction for work over soft ground—he gets it with Budd Duals.

And he gets fewer repair bills. Lower maintenance costs. More miles of service from his truck—and from 15,000 to 20,000 miles from a set of tires. . . .

When you have a wheel that carries this kind of a sales punch, it's bound to help things along—and you *can* have it by saying the word. Your manufacturer will deliver any job on Budd Duals.

*Graham Brothers truck, equipped with Budd Duals. One of a fleet operated by the Plaza Oil Company. Sold by the F. L. Sanford Company, Indianapolis, Ind.*



→ B U D D ←  
WHEEL COMPANY  
*Detroit*

# U. S. Car Washing System Quickly Pays for Itself

THE U. S. method of car washing speeds up production, pleases car owners and quickly pays for itself by making big profits. U. S. High Pressure Hydraulic Car Washing Systems are endorsed by leading automobile manufacturers, favored by the motoring public and accepted as standard by car dealers and garages.

U. S. High Pressure Car Wash Equipments are built to stand rough handling. Skilled mechanics are not needed to operate them efficiently and unskilled workers cannot harm them.

## Only U. S. Has These Advantages

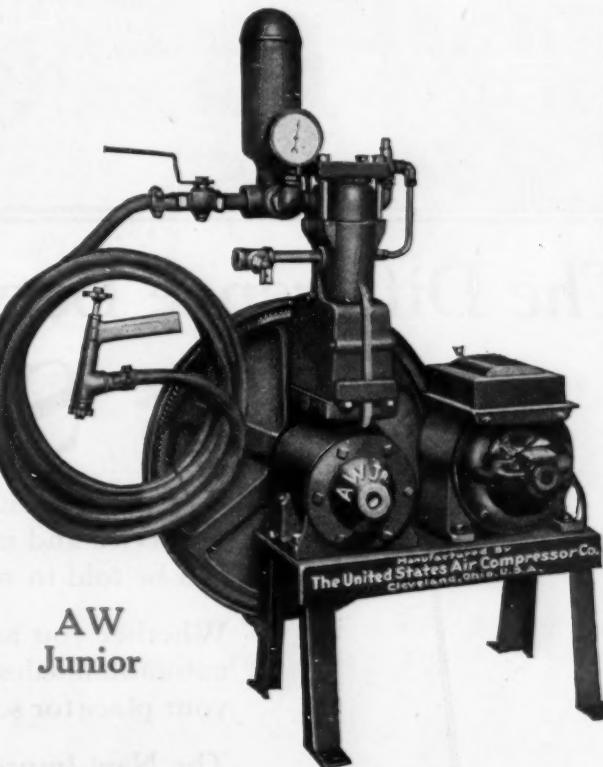
Patented U. S. Vacuum Breaker Valve permits connecting directly to ordinary hot and cold water supply lines without producing dangerous back pressure on plumbing fixtures. Transfer of warm water to tank or barrels is a messy, time wasting job and it quickly makes hot water cold. It is all eliminated by U. S. direct connection.

Straight line action of pistons reduces wear of plunger leathers or crimps, and when necessary crimps are easily replaced without disturbing connecting rod bearings.

All pumps of U. S. Car Wash Equipments are totally enclosed and self-oiling. All moving parts are continually bathed in oil. No bother with grease cups or oil cups.

U. S. manufactures four sizes of car washing units to meet every requirement.

For car dealers and garages U. S. now manufacturers special combination units giving volume air at both high and low pressure for a variety of uses, including paint spraying.



**AW  
Junior**

## Specially Designed for Car Dealers and Garages

The AW Junior is the only one-gun, totally enclosed, self-oiling, high pressure car washing unit on the market today. This unit is made to aid the smaller operator in solving his car washing problems at a moderate cost for equipment.

## THE UNITED STATES AIR COMPRESSOR CO.

5304 Harvard Avenue

General Office and Factory

Cleveland, Ohio

Eastern and Export Office: Fisk Bldg., New York City  
Western Office: 927 Santa Fe Avenue, Los Angeles, Calif.

Please Check

- AIR COMPRESSORS
- PAINT SPRAY
- CAR WASH EQUIPMENT

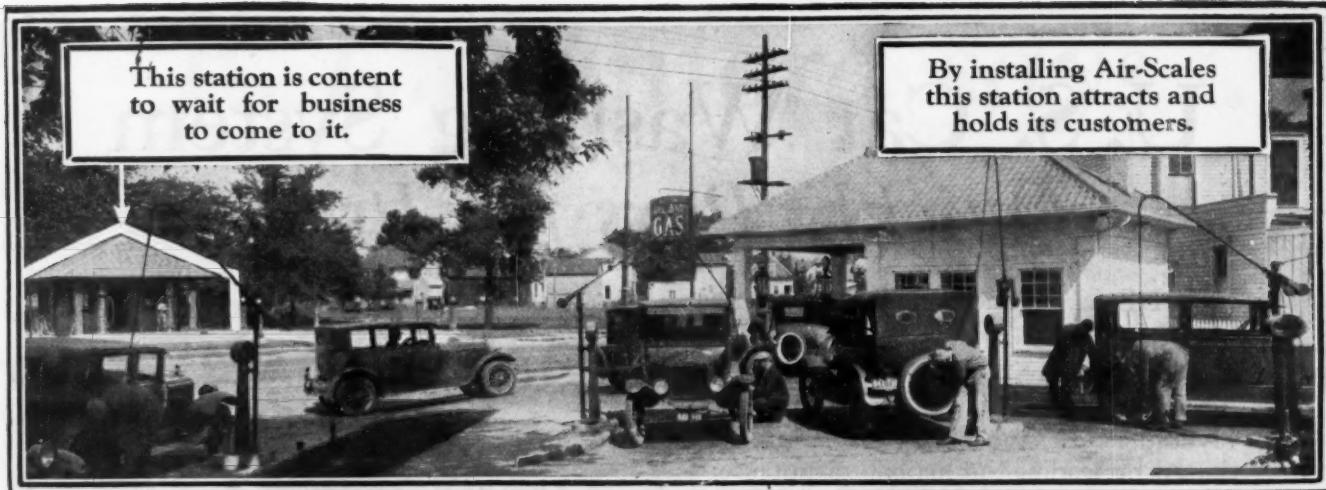


Print Name

NAME

ADDRESS

CITY



## The Difference Between Profit and Loss is SERVICE.

The illustration reproduced above tells a true story of service and its relation to business far better than can be told in words.

Whether you are operating an oil station, garage or automobile salesroom, the more motorists that come to your place for service, the better your business will be.

The New Improved Air-Scales permit you to give a real service that motorists appreciate. There is no air machine like Air-Scales. They weigh correctly the amount of air for each tire with a single adjustment of the scale. Only clean filtered air is permitted to enter the tire. Attractive in appearance and nothing to get out of order. Cannot freeze up in winter. Easy to install and fully guaranteed.

Endorsed and sold by leading jobbers everywhere—ask your jobber or write us direct.

*The Air-Scale Company*

812 Broadway, TOLEDO, OHIO

1780 Broadway  
NEW YORK, N. Y.

534 Allen Bldg.  
DALLAS, TEXAS

667 Folsom St.  
SAN FRANCISCO, CAL.



**"SUPERRENCH"**  
BOARDS  
*Make Wall Space PAY*

PUT up your "Superrench" Display where every customer will see it. Wall space is worth just what you hang on it. And the "Superrench" Boards make your wall space pay—in big "Superrench" profits.

Slender, handy looking "Superrenches" are sight sellers. Their trim lines and handsome nickel-finish display strikingly against the Royal Blue Boards. They catch the customer's attention. And when he sees that Chrome-Molybdenum "Superrenches" are guaranteed unbreakable—he buys.

Your Jobber's Salesman Will Gladly Get You a Sales Boosting Board. Ask Him!

**WILLIAMS**

**J. H. WILLIAMS & Co.**  
*"The Wrench People"*

New York      BUFFALO      Chicago

"Superrench" Boards are included free to dealers purchasing the wrenches they display. Six assortments are described in booklet which is yours on request.

Only a little  
time left



The combination offer of a Las-Stik Casing Plaster with each can of Las-Stik Tube Patch closes June 15th. There's only a little time left to get in on this, the greatest merchandising plan ever put behind a tube patch.

We want people to know through actual experience how good the Las-Stik Balloon Tire Casing Plaster really is—that it actually is a perfect, permanent repair for all casing breaks and blowouts.

This plan has helped them make that discovery. Dealers who pushed the plan from the beginning are today enjoying a large, legitimate sale of all sizes of Las-Stik Casing Plasters. And customers are constantly coming back for more.

There's still a little time to get in on the merchandising plan. Use it to open up the market in your community for the Las-Stik Plaster. Ask your jobber's salesman.

**THE LAS-STIK PATCH MFG. CO.**  
Hamilton, Ohio

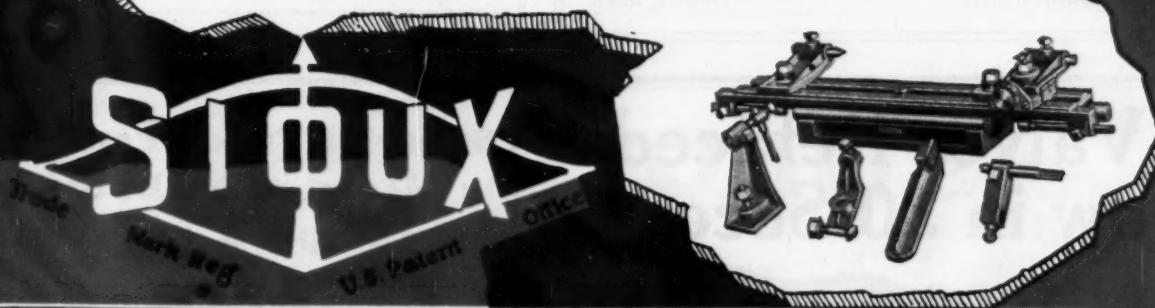
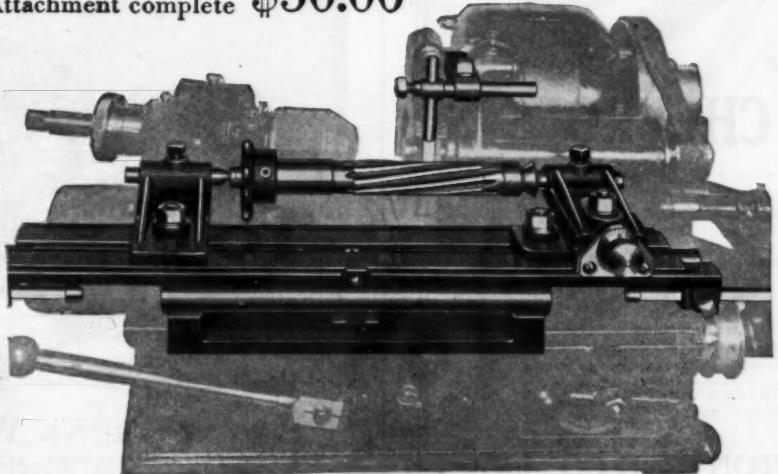


# EXPANSION REAMER GRINDING ATTACHMENT

FOR  
SIOUX VALVE FACE  
GRINDING MACHINE

Net Price of  
Attachment complete \$50.00

No. 680



**A**GAIN Sioux leads in bringing out money-saving, profit increasing tools for motor repair shops. If you use expansion reamers — either straight or spiral — this new Sioux attachment will save you money. It keeps your reamers in top notch cutting condition and makes it unnecessary to buy a whole new set of blades when one breaks. So simple and practical that any mechanic can get perfect results with it. No guesswork. Used only with the Sioux Valve Face Grinding Machine.

**Your Jobber Sells It.**

ALBERTSON & CO.  
SIOUX CITY IOWA U.S.A.



*Special  
Proposition for  
FORDS and CHEVROLETS*

Isn't it sound to figure that when a MOR-POWER piston ring is good enough to be standard equipment on Lincoln, Packard and other fine cars and on severe duty motors like Fordsons it is certainly good enough for Ford and Chevrolet Cars.

We have a very special proposition on Fords and Chevrolet Cars—too good for you to pass up. These are furnished to you in complete sets—eight Power rings and four Oil Stops.

EVERY MOR-POWER Ring is individually cast of superior grade of grey iron and given a velvet turned finish, then is thoroughly inspected for precision, flatness and tension.

We can offer you LOWER PRICES with increased profits. Write us today mentioning your jobber's name.

SUPERIOR PISTON RING CO., Inc.

6429 Epworth Blvd.

Detroit, Mich.

**ANNOUNCING!  
THE NEW LORENZ  
PORTABLE TOOL COMPARTMENT  
AT NO EXTRA CHARGE  
AS REGULAR EQUIPMENT IN EVERY  
TUKAWAY and BIG CHIEF  
AMERICA'S FINEST AUTOMOBILE TRUNKS  
AT NO EXTRA CHARGE**



(Patent Applied for)

COMPLETE UNITS, consisting of Lorenz Trunk, Bumperets, Trunk Carrier, Spare Tire Carrier for all cars.

A new addition to the "Lorenz" line of celebrated automobile trunks. Make reservation at once. "Lorenz" trunks, with the new portable tool compartment, will greatly increase your accessory profits.

TRUFIT RACKS designed to fit all makes of cars, including new models just released. No drilling of holes necessary.

**LORENZ TRUNK WORKS, INC.**

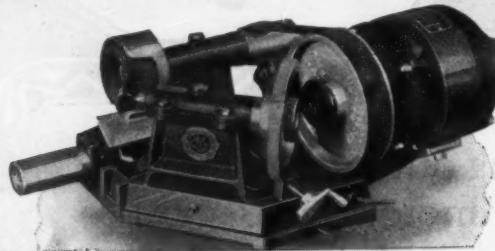
MAIN OFFICE AND FACTORY, AUTOMOTIVE DIVISION  
211-213 First Ave. North

MINNEAPOLIS We Sell Through Jobbers Only

MINNESOTA

New Jobber Sheets Ready

## Valves Refaced Now in 30 Seconds



Makes old, unevenly worn and pitted valves "factory new" in just half a minute. Leaves jobs true as new—each one perfect. Time saver—money maker. Low price (easy terms if you want, and guaranteed! Write us for terms — for more descriptive literature — now!

**The Crowe**  
CUPPED WHEEL  
VALVE REFAKER

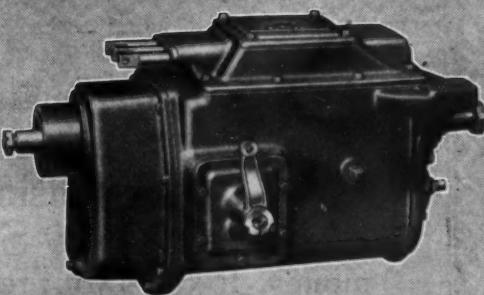
ONLY  
**\$87.50**

**Lisle Manufacturing Co.**

819 East Main Street  
Clarinda, Iowa

Manufacturers also of the new Lisle Reliner (worn brake lining remover, lining cutter, reliner and tire chain mender all in one). Slickest tool you ever saw.

**Superior Truck Performance  
is afforded by Brown-Lipe  
Seven-Speed Transmission**



Standard Equipment on  
Many Leading Trucks

**BROWN-LIPE  
GEAR CO.**

**Brown-Lipe Gear Co.**

**Syracuse, N. Y.**

# THE BIG SHINE

McAleer's Products will keep any lacquer finished car looking new. Dealers find McAleer's Products a fast selling line.



C. H. McALEER MFG. CO.

4718 Burlingame Ave.

Detroit, Mich.



*The Big Profit Item  
in the Tire Pump  
Field!*

"Sure! It's  
the BEST  
Pump Made"



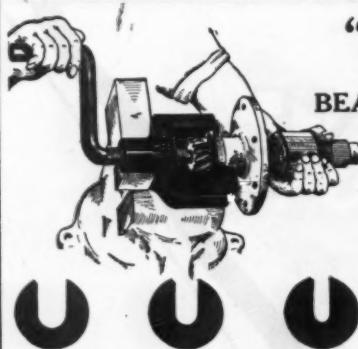
EVERY time you show a man a Rose Tire Pump and he says—"I'll take it!"—you get to ring up a sale with the biggest profit a tire pump can give you. That makes it worth while telling him it is the best pump—and why. It's the easy pumping—and the five year guarantee. Your jobber has Rose Tire Pumps for you—

Rose Hose  
for All Pumps



Get this new pump hose carton out on your counter where folks can see it—sales just come. Also leather washers. Ask your jobber for these little profit makers.

FRANK ROSE MFG. CO. HASTINGS, NEBR.



**"SAV-TIM"**  
combination  
**BEARING and PINION**  
**PULLER**

For Ford Armatures  
and Others  
Made of Malleable  
Quickest Puller  
on the Market  
Price, \$3.50  
Shipping weight 5 lbs.  
Salesmen Wanted

**MONARCH SALES COMPANY**  
19-25 N. Alabama Street  
Indianapolis, Ind.

# SIMPLEX

## Piston Rings

Supersede all other methods of rebuilding motors without resizing cylinders and pistons—

No Oil Pumping, No Piston Slap  
No Compression Loss

10,000 Mile Guarantee

backed up by Simplex Distributor with stock in your community

Send for details of this short cut scientific method of reconditioning ALL cylinders, no matter how worn, tapered, out of round or heat distorted.

**THE SIMPLEX PISTON RING CO.**  
of America, Inc.  
1971 East 66th St., Cleveland, Ohio

### FOLLETT'S NEW MODEL TIME STAMP



accounts for every labor minute

Prints the year, month, day, hour, minute, A.M. or P.M. at the exact moment the plunger is pressed—like this, for example:

NOV 19 1920 4 31 PM

Learn the interesting details from our descriptive data.

Tells when a job is started—and when it is finished. There can be no dispute over the time charge.  
Absolutely automatic — except for winding. Every machine guaranteed.

**Follett Time Recording Co., 217 High Street, Newark, N. J.**  
"Established Since 1904"



**THOMSON MFG. CO.**  
Dept. 21 Peoria, Ill.

If jobber does not stock write direct

Genuine  
**APEX Innerings**

Guaranteed to stop oil pumping and piston slap and renew motors without re-boring.

### JOHNS-MANVILLE

#### Asbestos Brake Lining

### LINCOLN

#### BALLOON

#### SHOCK ABSORBERS

For All Cars—\$15 to \$40 Per Set of Four  
**LINCOLN PRODUCTS COMPANY, 2649 N. Kildare Ave., Chicago, Ill.**



### Portable Electric

## DRILLS

#### GRINDERS—POLISHERS

Ask for Catalog 105  
The United States Electric Tool Co. Cincinnati, Ohio, U. S. A.  
Oldest Builders of Electric Drills and Grinders in the World



Branches in:  
New York  
Chicago  
Philadelphia  
Boston  
San Francisco Put Bunting Quality into all Replacements

### BUNTING

#### PHOSPHOR BRONZE

#### BUSHING BEARINGS

The Bunting Brass & Bronze Co., Toledo, O.

### VITALIC

Fan Belts, Radiator Hose, Air Hose, Universal Joint Discs

"Tougher than Elephant Hide"  
Sold through the Jobber Only.

Continental Rubber Works, Erie, Pa.

**U**

Replacement Generator Field Coils  
Quit retaping oil-soaked coils. Use U. S. Replacement Coils, and get the business. Uniform in price: for Fords \$1.50; others \$3.00.

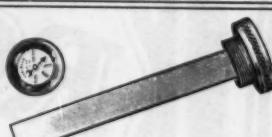
**GUARANTEED ARMATURE SERVICE**  
Immediate replacements from our stock of 8,000 ready to ship.

Inquire about our complete service.  
**U. S. Armature & Motor Service**  
Division U. S. Auto Supply Co.  
11-17 S. Desplaines Ave. Chicago

**S**

### TASCO

TRADE MARK REG.  
Gas Gauge for Ford  
Chevrolet—Overland—Star  
Sells quick at \$1.25 retail. Types "K" and "J" for 1926 Chevrolets and all Stars sell at \$1.50.



THE AKRON-SELL CO. AKRON, OHIO

**BRUNNER**  
AIR COMPRESSORS  
**FREE**

### Write for the Book

#### "AIR PROFITS"

describing many new uses for compressed air. Shows how to make an air compressor earn greater profits.  
**BRUNNER MFG. CO.**  
UTICA NEW YORK



Let us send our profit-boosting plan. It's Free.

**Orrville Spring Governors***Make Smooth-Running Profits*

Among the foremost popular sellers for easier riding. Simple in operation and easy to install. Check the rebound and control the springs against "galloping". Ask for illustrated literature and discounts worth while.

ORRVILLE SPRING GOVERNOR CO., INC.  
500 Brant Bldg. Canton, Ohio

Pat. Pending

**Arrow Head****Arrow Head's**

most complete and flexible up-to-date line of pistons and pins assures quick service on the 4000 most-called-for fits and applications, including practically "all motors, all years, all models."

Arrow Head Steel Products Company  
Buffalo Minneapolis, Minn. Chicago

The Jordan is different  
—and always will be.



Jordan Motor Car Company, Inc.  
Cleveland, Ohio

**FREDERICKS**  
*Rewinds*

New low prices: Rewinding or exchanging any two unit type of automobile generator or starter armature. \$2.50. Any type of Ford armature \$1.50. Special prices on Ford armatures in quantities.

H. M. FREDERICKS CO., Lock Haven, Pa.

**WIRE OR WRITE US FOR NEW OR USED  
TIRES — PARTS — ACCESSORIES**

IF IT'S FOR AN AUTOMOBILE WE HAVE IT!  
SEE OUR NEXT DISPLAY IN MOTOR AGE APRIL 28  
STATE AUTO PARTS CORPORATION

2011-13-15 S. State St., Chicago, Ill.

**Here Is Something to Sell!**

A piston ring, on the principle of a packing ring, that gives remarkable results in service, is used in thousands by automobile factory branches for replacement—and pays a profit worth while. WRITE FOR DETAILS.  
THE CORK-SEALED PISTON RING CORP.  
2332 Michigan Avenue, Chicago  
Factory: Denver, Colo.  
Canadian Distributors: Purser, Bull & Co., Ltd.  
Toronto, Canada

**TIMKEN**  
*Tapered*  
**ROLLER BEARINGS**

Makers of  
the world's  
best known  
fan belts.

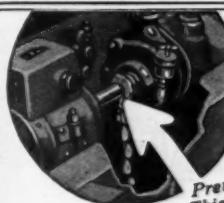
L. H. GILMER &amp; CO., Tacony, Philadelphia

**The Burgan Cotter Pin Extractor***Works Like Magic*

It goes in anywhere, grips the cotter pin—snaps it out in a jiffy—holds it until released. You don't have to pull or twist. Just squeeze the handles. It's a great tool!

Write for prices and details

THE BURGAN CORPORATION  
Shenandoah Iowa

**SPRING IS HERE!**

Make a permanent repair on the leaky Water-pump. CONNEAUT PLASTIC METALLIC PACKING does the job even on the worn shaft.

All sizes in one can. Stocked at your jobbers.  
1 lb. can \$1.75 per lb.  
5 lb. can \$1.60 per lb.

Manufactured by  
THE CONNEAUT PACKING CO.  
Ohio

**RADIATOR CAPS****ORNAMENTS**

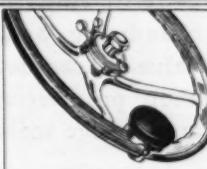
Confidence in a product that has been produced with scrupulous attention to detail is born only of experience. Our clients know they receive only the finest in material and artistry.

FAITH MFG. CO., Inc. 2533-39 N. Ashland Ave., Chicago, Ill.

**Whipple  
STEER-O-NOB**

A handle for  
Steering Wheels  
Spin the steering  
wheel around with  
ONE HAND—Have  
the other free for  
changing gears.

Whipple Mfg. Co.  
33 W. 60 St.  
New York

Highest quality hand polished  
solid walnut. Price \$5.00

**The K-S GASOLINE  
Telegage**

A gasoline gauge on the dash. Note our half-page advertisement in the Saturday Evening Post, May 28. Write for description and proposition to the trade.

KING-SEELEY CORPORATION  
298 Second Street, Ann Arbor, Michigan  
Chicago Branch, 2450 Michigan Blvd.

Two Hones in One  
**HALLOHONE** \$35.  
Solid Pressure — Spring Pressure

**PATENTS & PAT. ATTORNEYS****C. L. PARKER**

Ex-Examiner U. S. Patent Office

Attorney-at-Law and Solicitor of Patents

McGill Building, Washington, D. C.

Patent, Trade Mark and Copyright Law

**CLASSIFIED ADVERTISING****BUSINESS OPPORTUNITIES****DODGE BROTHERS DEALER  
WANTED**

Excellent opportunity for a Dodge Brothers Salesman with \$5,000 to \$7,000 Capital to get a Dealership of his own in a wealthy town of 6,000 with a County for territory in North-eastern Illinois. Box No. 6298, Motor Age, 5 S. Wabash Ave., Chicago, Ill.

**HELP WANTED**

Wanted. Salesmen calling on auto-mechanics to sell patented socket wrenches and other automotive tools, that sell on first demonstration. Every mechanic a live prospect. Liberal commission. York Wrench Mfg. Co., 3140 Greenview Ave., Chicago.

Business success depends upon the satisfaction of business wants—hence

Classified Advertising

# NOW IN PREPARATION!

The Annual  
Sales and Service Reference  
Number

of

# MOTOR AGE

*Will be published*

**May 5, 1927**

THIS big special issue of MOTOR AGE will contain an immense volume of merchandising and maintenance information of value to car dealers, accessory dealers, repair shop proprietors, garage men, and all other automotive merchants.

Many new and valuable features are planned for the coming issue of the Sales and Service Reference Number.

MAKE A NOTE OF THE  
DATE — MAY 5th — BE  
SURE YOU GET YOUR  
COPY OF THIS COMPRE-  
HENSIVE REFERENCE  
GUIDE

# MOTOR AGE

5 So. Wabash Ave., Chicago, Ill.

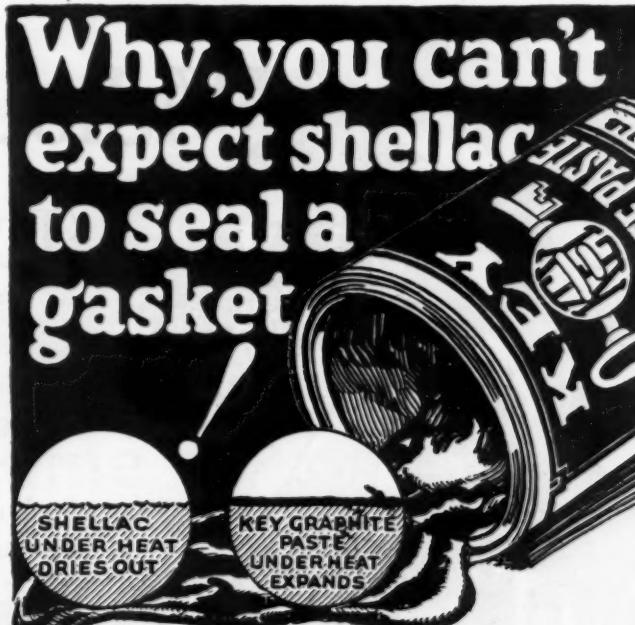
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*Cup Grease or  
A Shellac Compound  
Won't Seal that Gasket*

## Key Graphite Paste Seals Permanently

KEY GRAPHITE is such a successful trouble chaser it has become popular with service managers of the biggest automobile companies in the world. It has proved a dollar and time saver for many a repair man.

It is an acid resisting, non-corrosive, non-oxidizing, expansible filler with a thick sorghum base containing no oil or grease. When heated it expands. Cup grease or shellac only keeps the gasket in place for a very short time.

Key Graphite seals every gasket on the auto and prevents sulphate corrosion on the battery terminal posts. Dozens of other uses.

### Write For FREE Sample

Test it out in your own shop. Fill in the coupon now.

**KEY BOILER  
EQUIPMENT CO.  
EAST ST. LOUIS, ILL.**

Key Boiler Equipment Co. MA 42127  
27th and McCasland Ave., E. St. Louis, Ill.

Send me free sample of Key Graphite Paste and descriptive leaflet on where and how to use it.

Name.....

Firm.....

Address.....

City ..... State.....



# Without a Handicap

THE owner of a Gardner reflects its fine balanced car value in the justifiable pride and satisfaction he derives from its beauty and performance.

Smooth, tremorless operation at every speed, as he travels the highway; comfortable riding; high gasoline mileage and sound reliability have been building up an enviable enthusiasm for Gardner Eights and Sixes.

Such enthusiasm can be founded only on car performance that is unquestionable—performance that is the outgrowth of a half century of experience in building fine vehicles coupled with nearly nineteen years of experience that has developed the remarkable Lycoming Motors with which Gardner cars are powered.

## LYCOMING MANUFACTURING COMPANY

Makers of fine Fours, Sixes and Eights-in-Line

WILLIAMSPORT :: PENNSYLVANIA

Export Department—44 Whitehall Street, New York City

MEMBER OF MOTOR TRUCK INDUSTRIES, INC., OF AMERICA

## LYCOMING Motors

*Years Ahead in Automobile Motor Efficiency*



## GARDNER MOTOR CARS



**25¢**

*For Genuine*  
**American  
Hammered  
Piston Rings**

**No higher than  
Ordinary Snap Rings**

**and  
American  
Hammered  
Oilslot Rings  
are only 50 Cents**

**No higher than  
ordinary Oil rings**

*Look  
for the  
BALL POINT  
HAMMER  
MARKS  
inside the  
ring*

**American Hammered Piston Ring Co. *Baltimore, Md.*  
World's Largest Manufacturer of HAMMERED Piston Rings**



## Is There any Money in Rewiring Autos? Not if You Haven't any Cable

Mr. Smathers is embarrassed—he has a right to be.

He just sold a man on the idea that his car needed rewiring—expatiated (nice word that) on the advantage of having it done—told him how much better the car would operate—how much better it would look under the hood.

Now he wants the job done at once and Mr. Smathers discovers that he hasn't the right kind of cable.

Mr. Smathers is registering a mental vow to get a Packard Cable Department *at once*. Then he'll always have the right kind of cable—no matter what kind of car comes in.

He knows that rewiring is profitable, and next time he's going to be ready.

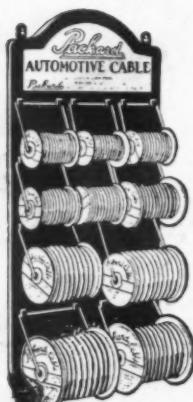
Ten kinds of cable—100 feet each—takes care of any car. Packard Quality—the quality others shoot at. Complete description of each variety in the assortment in Chilton's catalog. Handsome enameled pressed steel merchandiser. Order today, using the blank below.

Consult your Chilton Directory for detail description of each of the following Trade Numbers which make up Packard Assortment A. Trade Nos. 50-52-71-46-45-44-42-56-113-43.

The Packard Electric



Company Warren, Ohio



**\$28.50 Buys  
A Complete  
Packard Cable  
Department  
Higher West of Rockies**

Sells for \$59.00

### CLIP and MAIL

The Packard Electric Co.  
Warren, Ohio.  
Gentlemen:

Please ship to us through ..... (Name of Jobber)

One Packard Assortment A with De Luxe Merchandiser. Please include in this assortment Packard Wiring Chart, Color Display Card, Miniature Catalog, and other sales helps.

Name.....

Address.....

Company.....